FOU	ODN	F	Baranistian.	FMI	FMI	FMI	Linna	Communit
Name ABS Wabco D	SPN [Hex] 40B01	Fault Component Wheel sensor left front fault.	Description air gap too large, sensor output voltage too low but just exceeds trigger	[DEC]	[HEX]	PMI Description air gap	Lamp status	Comment ABS: wheel disabled
ABS Wabco D	40001	Wheel sensor left from fault.	level such proportion of tyre diameter/ pole wheel teeth number that wheel	2		incorrect tyre or pole wheel		ASR: disabled ABS: wheel disabled
ABS Wabco D			speed difference within front axle > 10 % or difference within wheels of different axles > 19 %. Pheus or number of polewheel teeth are different.	2	02	incorrect tyre or pole writer		ASR: disabled
ABS Wabco D			Check wheel circumference and number of polewheel DC voltage detected. Short circuit or impedance to battery voltage.	3	03	Short to Battery		ABS: wheel disabled
ABS Wabco D			Short circuit to ground is detected.	4		Short to Ground		ASR: disabled ABS: wheel disabled
ABS Wabco D			Open circuit is detected	5		open circuit		ASR: disabled ABS: wheel disabled
ABS Wabco D			Short circuit between sensorwires IG/IGM is detected	6		Short circuit		ASR: disabled ABS: wheel disabled
ABS Wabco D			Cyclic drop out detected at speed higher than 10 km/h. Several wheel	7		incorrect pole wheel		ASR: disabled ABS: wheel disabled
ABS Wabco D			revolution necessary. 16 sec. slip duration detected.	8	08	•		ASR: disabled ABS: wheel disabled
ABS Wabco D			Wire IG or IGM of another sensor is detected.	9		wires mismatched		ASR: disabled ABS: wheel disabled
ABS Wabco D			Temporarily loss of wheel speed signal. Air gap too large, sensor voltage	10		speed drop-out		ASR: disabled ABS: wheel disabled
ABS Wabco D			exceeds trigger level at too late. Brake squeezes or chatters.	11		abnormal speed (chatter)not stored		ASR: disabled ABS: partial disabled
								ASR: disabled with standard parameter set not as fault interpretated FMI 11 not stored
ABS Wabco D			Not plausible sensor frequency measured	12	0C	frequency too high		ABS: wheel disabled ASR: disabled
ABS Wabco D	40B02	Wheel sensor right front fault	air gap too large, sensor output voltage too low but just exceeds trigger level	1	01	air gap		ABS: wheel disabled ASR: disabled
ABS Wabco D			such proportion of tyre diameter/ pole wheel teeth number that wheel speed difference within front axle > 10 % or difference within wheels of different axles > 19 % . Pneus or number of polewheel teeth are different.	2	02	incorrect tyre or pole wheel		ABS: wheel disabled ASR: disabled
ABS Wabco D			Check wheel circumference and number of polewheel DC voltage detected. Short circuit or impedance to battery voltage.	3	03	Short to Battery		ABS: wheel disabled
ABS Wabco D			Short circuit to ground is detected.	4	04	Short to Ground		ASR: disabled ABS: wheel disabled
ABS Wabco D			Open circuit is detected	5	05	open circuit		ASR: disabled ABS: wheel disabled
ABS Wabco D			Short circuit between sensorwires IG/IGM is detected	6	06	Short circuit		ASR: disabled ABS: wheel disabled
ABS Wabco D			Cyclic drop out detected at speed higher than 10 km/h. Several wheel	7	07	incorrect pole wheel		ASR: disabled ABS: wheel disabled
ABS Wabco D			revolution necessary. 16 sec. slip duration detected.	8	80	slip		ASR: disabled ABS: wheel disabled
ABS Wabco D			Wire IG or IGM of another sensor is detected.	9	09	wires mismatched		ASR: disabled ABS: wheel disabled
ABS Wabco D			Temporarily loss of wheel speed signal. Air gap too large, sensor voltage	10	0A	speed drop-out		ASR: disabled ABS: wheel disabled
ABS Wabco D			exceeds trigger level at too late. Brake squeezes or chatters.	11	0B	abnormal speed (chatter)not stored		ASR: disabled ABS: partial disabled ASS: partial disabled
ADOM			Not plausible copper for a very service.	40	00	fraguanou too high		ASR: disabled with standard parameter set not as fault interpretated FMI 11 not stored ASR: disabled disabled
ABS Waboo D	40000	Wheel const-left ("	Not plausible sensor frequency measured	12		frequency too high		ABS: wheel disabled ASR: disabled
ABS Wabco D	40B03	Wheel sensor left rear fault	air gap too large, sensor output voltage too low but just exceeds trigger level	1		air gap		ABS: wheel disabled ASR: disabled ASR: wheal disabled
ABS Wabco D			such proportion of tyre diameter/ pole wheel teeth number that wheel speed difference within front axle > 10 % or difference within wheels of different axles > 19 %. Pneus or number of polewheel teeth are different.	2	02	incorrect tyre or pole wheel		ABS: wheel disabled ASR: disabled
ABS Wabco D			Check wheel circumference and number of polewheel	3	00	Short to Battery		ABS: wheel disabled
ABS Wabco D			DC voltage detected. Short circuit or impedance to battery voltage.			Short to Bround		ASS: wheel disabled ASS: wheel disabled
ABS Wabco D			Short circuit to ground is detected. Open circuit is detected	4 5		open circuit		ASR: disabled ABS: wheel disabled
ABS Wabco D			Short circuit between sensorwires IG/IGM is detected	6		Short circuit		ASR: disabled ASS: wheel disabled
ABS Wabco D			Cyclic drop out detected at speed higher than 10 km/h. Several wheel	7		incorrect pole wheel		ASR: disabled ABS: wheel disabled
ABS Wabco D			revolution necessary. 16 sec. slip duration detected.	8		slip		ASR: disabled ABS: wheel disabled
ABS Wabco D			Wire IG or IGM of another sensor is detected.	9		wires mismatched		ASR: disabled ABS: wheel disabled
ABS Wabco D			Temporarily loss of wheel speed signal. Air gap too large, sensor voltage	10		speed drop-out		ASR: disabled ABS: wheel disabled
ABS Wabco D			exceeds trigger level at too late. Brake squeezes or chatters.	11		abnormal speed (chatter)not stored		ASR: disabled ABS: wheel disabled
ABS Wabco D			Not plausible sensor frequency measured	12		frequency too high		ASR: disabled ABS: wheel disabled
ABS Wabco D	40B04	Wheel sensor right rear fault	air gap too large, sensor output voltage too low but just exceeds trigger	1		air gap		ASR: disabled ABS: wheel disabled
ABS Wabco D			level such proportion of tyre diameter/ pole wheel teeth number that wheel	2		incorrect tyre or pole wheel		ASR: disabled ABS: wheel disabled
			speed difference within front axle > 10 % or difference within wheels of different axles > 19 %. Pneus or number of polewheel teeth are different.					ASR: disabled
ABS Wabco D			Check wheel circumference and number of polewheel DC voltage detected. Short circuit or impedance to battery voltage.	3	03	Short to Battery		ABS: wheel disabled
ABS Wabco D			Short circuit to ground is detected.	4	04	Short to Ground		ASR: disabled ABS: wheel disabled
ABS Wabco D			Open circuit is detected	5	05	open circuit		ASR: disabled ABS: wheel disabled
ABS Wabco D			Short circuit between sensorwires IG/IGM is detected	6	06	Short circuit		ASR: disabled ABS: wheel disabled
ABS Wabco D			Cyclic drop out detected at speed higher than 10 km/h. Several wheel	7	07	incorrect pole wheel		ASR: disabled ABS: wheel disabled
ABS Wabco D			revolution necessary. 16 sec. slip duration detected.	8	08	slip		ASR: disabled ABS: wheel disabled
ABS Wabco D			Wire IG or IGM of another sensor is detected.	9	09	wires mismatched		ASR: disabled ABS: wheel disabled
ABS Wabco D			Temporarily loss of wheel speed signal. Air gap too large, sensor voltage	10	0A	speed drop-out		ASR: disabled ABS: wheel disabled
ABS Wabco D			exceeds trigger level at too late. Brake squeezes or chatters.	11	0B	abnormal speed (chatter)not stored		ASR: disabled ABS: wheel disabled
ABS Wabco D			Not plausible sensor frequency measured	12	0C	frequency too high		ASR: disabled ABS: wheel disabled
ABS Wabco D	40B07	Modulator left front failure	DC voltage detected. Short circuit or impedance to battery voltage.	3	03	Short to Battery		ASR: disabled ABS: disabled ASP: disabled
								ASR: disabled SMR: disabled EBL: disabled
ABS Wabco D ABS Wabco D			Open circuit is detected Short circuit between sensorwires IG/IGM is detected	5		open circuit Short to Ground		LBL: disabled ABS: wheel disabled ABS: wheel disabled
ABS Wabco D	40B08	Modulator right front failure	DC voltage detected. Short circuit or impedance to battery voltage.	3		Short to Battery	<u> </u>	ABS: disabled ASR: disabled
								SMR: disabled EBL: disabled
ABS Wabco D ABS Wabco D			Open circuit is detected Short circuit between sensorwires IG/IGM is detected	5 6		open circuit Short to Ground		ABS: wheel disabled ABS: wheel disabled
ABS Wabco D	40B09	Modulator left rear failure	DC voltage detected. Short circuit or impedance to battery voltage.	3		Short to Battery		ABS: disabled ASR: disabled
							L	SMR: disabled EBL: disabled
ABS Wabco D			Open circuit is detected	5	05	open circuit		ABS: wheel disabled ASR: Diff brake disabled
								SMR: disabled EBL: wheel disabled
ABS Wabco D			Short circuit between sensorwires IG/IGM is detected	6	06	Short to Ground		ABS: wheel disabled ASR: Diff brake disabled
								SMR: disabled EBL: wheel disabled
ABS Wabco D	40B0A	Modulator right rear failure	DC voltage detected. Short circuit or impedance to battery voltage.	3	03	Short to Battery		ABS: disabled ASR: disabled
								SMR: disabled EBL: disabled
ABS Wabco D			Open circuit is detected	5	05	open circuit		ABS: wheel disabled ASR: Diff brake disabled
ADOUG			Ob at similabetor	_		Charles Council		SMR: disabled EBL: wheel disabled
ABS Wabco D			Short circuit between sensorwires IG/IGM is detected	6	06	Short to Ground		ABS: wheel disabled ASR: Diff brake disabled
ADC		222 2 4						SMR: disabled EBL: wheel disabled
ABS Wabco D	40B0D	DBR, Retarder	DC voltage detected. Short circuit or impedance to battery voltage. Open circuit is detected	5	05	Short to Battery open circuit		DBR control disabled DBR control disabled
ABS Wabco D ABS Wabco D	40B0E	ABS error	Short circuit between sensorwires IG/IGM is detected Short circuit to ground is detected.	6		Short to Ground Voltage, low voltage/open circuit	 	DBR control disabled ABS: disabled
								ASR: disabled SMR: disabled
ABS Wabco D			Open circuit is detected	5	05	WL-Ground	 	EBL: disabled ABS: disabled
								ASR: disabled SMR: disabled
ABS Wabco D			Cyclic drop out detected at speed higher than 10 km/h. Several wheel	7	07	Valve Relay		EBL: disabled ABS: disabled
			revolution necessary.					ASR: disabled SMR: disabled
ABS Wabco D	40B0F	ABS error	DC voltage detected. Short circuit or impedance to battery voltage.	3	03	Voltage, low voltage/open circuit		EBL: disabled Dif&aux output disabled ASR: Diff brake disabled
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FOU	ODN	Fault Oanna anna	Description	Гемі	FMI		1	0
Name ABS Wabco D	SPN [Hex]	Fault Component	Description Short circuit to around is detected.		[HEX]	FMI Description Voltage, low voltage/open circuit	Lamp status	Comment ABS: disabled
ABS Wabco D			Short circuit to ground is detected.	-	04	voltage, low voltage/open circuit		ASR: disabled SMR: disabled
ABS Wabco D			Open circuit is detected	5	05	WL-Ground		EBL: disabled Dif&aux output disabled
ABS Wabco D			Short circuit between sensorwires IG/IGM is detected	6	06	Short to Ground		ASR: Diff brake disabled
ABS Wabco D			Cyclic drop out detected at speed higher than 10 km/h. Several wheel revolution necessary.	7	07	Valve Relay		ABS: disabled ASR: disabled
ABS Wabco D	40B10	ABS error	DC voltage detected. Short circuit or impedance to battery voltage.	3	02	Voltage, low voltage/open circuit		SMR: disabled EBL: disabled EBL: starts depending from deceleration
ABS Wabco D ABS Wabco D		ABS error	Open circuit is detected. Open circuit or impedance to battery voltage. DC voltage detected. Short circuit or impedance to battery voltage.	5	05	Brake input open or shorted to ground Diff. Brake Valve, shorted to UBATT		EBL: starts depending from deceleration ASR: Diff brake disabled
ABS Wabco D ABS Wabco D			Open circuit is detected Short circuit between sensorwires IG/IGM is detected	5 6	05 06	Diff. Brake Valve, open circuit Diff. Brake Valve, shorted to ground		ASR: Diff brake disabled ASR: Diff brake disabled
ABS Wabco D ABS Wabco D	40B13	ABS error	DC voltage detected. Short circuit or impedance to battery voltage. Open circuit is detected	5	05	Trailer Brake Valve, shorted to UBATT Trailer Brake Valve, open circuit		
ABS Wabco D	40B16	ABS error	Short circuit between sensorwires IG/IGM is detected	8	06	Trailer Brake Valve, shorted to ground		
ABS Wabco D	40B17	ABS error	Open circuit is detected	5				WL if grounded. Off if burned out
ABS Wabco D	40BE7	ABS error.SAEJ1939	Unplausibility between received vehicle speed and ABS vehicle speed.	2	02	SAE J1939 VSC1 speed bad plausibility		Supevision normally not activated
ABS Wabco D			SAE J1939 communication impossible. SAE J1939 high open or short circuit to plus or ground or sae J1939 low or	5	05	SAE J1939 open or short circuit		ASR: disabled SMR: disabled
ABS Wabco D			low/high are misured SAE J1939 communication impossible. SAE J1939 high open or short circuit to plus or ground or sae J1939 low or	6	06	SAE J1939 no access		SAE J1939 switched to inactive because communication is disturbed. ASR: disabled SMR: disabled
			low/high are misured					ABS ECU tries to restart com. Within 10s it is not possible.
								SAE J1939 remains inactive. FMI 5 might be additionally stored.
ABS Wabco D			Driveline integrated retarder sends message incorrectly. Timeout supervision detects faults if activated.	7		SAE J1939 ERC_DR time-out SAE J1939 ERC_ER (EXR) time-out		Driveline retarder may cause instability.
ABS Wabco D			Engine integrated retarder sends message incorrecty. Timeout supervision detects faults if activated. Standard is no timeout supervision.	0	06	SAE J1939 ERC_ER (_EAR) IIIIIe-out		Engine retarder may cause instability.
ABS Wabco D			Gearbox sends message incorrecty. Timeout supervision detects faults if activated.	9	09	SAE J1939 ETC time-out		Dragtorque control influenced.
ABS Wabco D			Standard is no timeout supervision. Engine control sends torque message incorrectly.	9	09	SAE J1939 EEC1 time-out		Dragtorque control influenced.
ABS Wabco D			Timeout supervision detects fault. Exaust integrated retarder sends message incorrectly. Timeout supervision detects faults if activated.	10	0A	SAE J 1939 ERC_EXR time-out		Exaust retarder may cause instability.
ABS Wabco D			Timeout supervision detects faults if activated. Standard is no timeout supervision. Internal fault	12	0C	SAE J1939, internal error		ABS: disabled
								ASR: disabled SMR: disabled
ABS Wabco D	40BFB	ABS error. Overvoltage	Supply voltage too high for more than 5s	3	03	Overvoltage		EBL: disabled All valve disabled.
ABS Wabco D ABS Wabco D	40BFD	ABS error	Wheel parameters are out of tolerance. No ABS, ASR, EBL, SM Checksum of parameter or analog adjustment is wrong.	2 12		EEPROM, Wheel Parameter incorrect EEPROM checksum		No ABS, SMR, Diff Brake, EBL Wrong parameter No ABS, SMR, Diff Brake, EBL.
ABS Wabco D	40BFE	ABS error	No modulators connected.	5		Electronic w/o loads		No blink code. Normal for EOL testing of single cabin.
								Fault not memorized. No ABS, SMR, ASR, EBL.
ABS Wabco D			One axle was much faster than other.	8		excessive slip/dynotester		On rolling roads responce dynotester slip supervision time can be exceeded when fault detection is not disabled by diagnostic tools or blinkcode (3s).
ABS Wabco D			Control via modulator was too long. After a delay time function is normal. Internal error	9		Modulator valve activation time Multiple possibilities	Yellow	75% Of 5min modulator was activated. No ASR during fault activeness. No ABS, SMR, Diff Brake, EBL.
BC IBC2	22101	EEPROM checksum error		12	0C		. 0011	No blink code.
BC IBC2	22102	ECU Overheating	The junction Temperature of the output drivers is greater than max. junction temperature(150°C).	12	0C			
BC IBC2	22103	Supply Line 1	The acquired voltage is below or above the thresholds. The error shall be debounced.	00 01 03	00 01 03	32V <v<36v 8V<v<18v V>36V</v<18v </v<36v 		
BC IBC2	22104	Supply Line 2	The acquired voltage is below or above the thresholds. The error shall be	04	04			
			debounced.	01 03	01	8V <v<18v V>36V</v<18v 		
BC IBC2	22105	Supply Line 3	The acquired voltage is below or above the thresholds. The error shall be debounced.	04 00 01	04 00 01	V<8V 32V <v<36v 8V<v<18v< td=""><td></td><td></td></v<18v<></v<36v 		
			accounted.	03 04	03			
BC IBC2	22106	Supply Line 4	The acquired voltage is below or above the thresholds. The error shall be debounced.	00 01	00 01	32V <v<36v 8V<v<18v< td=""><td></td><td></td></v<18v<></v<36v 		
BC IBC2	22107	Supply Line 5	The acquired voltage is below or above the thresholds. The error shall be	03 04 00	03 04	V>36V V<8V 32V <v<36v< td=""><td></td><td></td></v<36v<>		
DO IDO2	22101	опрру Епте о	debounced.	01 03		8V <v<18v< td=""><td></td><td></td></v<18v<>		
BC IBC2	22108	Turn Lights Right	The acquired load current is below the threshold (at least a load on three	04 5	04 05	V<8V < _S		
BC IBC2	22109	Turn Lights Trailer Right	is a open circuit) On/Off diagnostic.The test is performed only when the driver is Off.The	5	05	(I _s follows the I to V linear characteristic of the lamps)		
BC IBC2	2210A	Turn Lights Right or	error is detected only when at open circuit. Driver Short Circuit to ground or Overload or Overheating protection.The	6	06			
BC IBC2	2210B	Turn Lights Trailer Right Turn Lights Left	test is performed only when the driver is On. The acquired load current is below the threshold (at least a load on three is a open circuit)	5	05			
BC IBC2	2210C	Turn Lights Trailer Left	On/Off diagnostic.The test is performed only when the driver is Off.The error is detected only when at open circuit.	5	05	(Is colored the File V illedictional of the ramps)		
BC IBC2	2210D	Turn Lights Left or Turn Lights Trailer Left	Driver Short Circuit to ground or Overload or Overheating protection. The test is performed only when the driver is On.	6	06			
BC IBC2	2210E	Parking Left &Marker Right Front Lights	The acquired load current is below the threshold (at least a load on two is a open circuit).	5	05	I< I _S (I _s follows the I to V linear characteristic of the lamps)		
BC IBC2	2210F	Parking Rear Right Lights	The acquired load current is below the threshold (at least a load on two is a open circuit).	5	05	I< I _S (I _s follows the I to V linear characteristic of the lamps)		
BC IBC2	22110	License Plate Lights	The acquired load current is below the threshold (at least a load on two is a open circuit).	5	05	15		
BC IBC2	22111	Parking Left & Marker Right Front Lights OR Parking Rear Right Lights OR License Plate	Driver Short Circuit to ground or Overload or Overheating protection.The	6	06	, , , , , , , , , , , , , , , , , , ,		
BC IBC2	22112	Lights OR Trailer Lights Parking Right & Marker Left Front Lights	The acquired load current is below the threshold (at least a load on two is	5	05	I <i<sub>S</i<sub>		
BC IBC2	22113	Parking Rear Left Lights	a open circuit). The acquired load current is below the threshold (at least a load on two is	5	05	(I _s follows the I to V linear characteristic of the lamps)		
BC IBC2	22114	Marker Rear Lights	a open circuit). The acquired load current is below the threshold (at least a load on two is	5		(I _s follows the I to V linear characteristic of the lamps) I< I _S		
BC IBC2	22115		a open circuit). Driver Short Circuit to ground or Overload or Overheating protection.The	6	06	(I _s follows the I to V linear characteristic of the lamps)		
2.502	9	Parking Rear Left Lights OR Marker Rear Lights OR Parking & Marker Trailer & Side	test is performed only when the driver is On.					
BC IBC2	22116	Marker Left Lights Rear Fog Left & Right Lights	The acquired load current is below the threshold (at least a load on two is	5	05	< ₆		
BC IBC2	22117	Rear Fog Left&Right Lights OR Rear Fog	a open circuit) Driver Short Circuit to ground or Overload or Overheating protection.The	6	06	(I _s follows the I to V linear characteristic of the lamps)		
BC IBC2	22118	Trailer Left&Right Lights Stop Light Left	test is performed only when the driver is On. The acquired load current is below the threshold (the only load is a open circuit).	5	05			
BC IBC2	22119	Stop Light Right	The acquired load current is below the threshold (the only load is a open	5	05	ů .		
BC IBC2	2211A	Stop Light Left or Stop Light Right or Stop	circuit). Driver Short Circuit to ground or Overload or Overheating protection.The	6	06	(I _s follows the I to V linear characteristic of the lamps)		
BC IBC2	2211B	Trailer Left&Right Lights Turn Lights Switches	test is performed only when the driver is On. Turn Left and Turn Right Switchesare both activated. The Turn Left Lights Status and Turn Right Lights Status CAN parameters are ON but the	2	02			
BC IBC2	2211C	Windshield Wiper	Status and Turn Right Lights Status CAN parameters are ON but the Emergency Lights Status CAN parameter is OFF. Windshield Wiper switches activated at the same time or every faulty on	2	02			
		·	Windshield Wiper (fuse on supply line 6 faulty, engine blocked or short circuited, engine interrupted, cam always to ground, cam always open)					
BC IBC2	2211D	Engine Brake Preselection Mode Switches	Engine Brake Mode Accelerator Idle and Engine Brake Mode Brake Pedal Switches are both activated.	2	02			
BC IBC2	2211E	Diff.Rear.Transv.Lock Rockwell Switches	Switches are both activated. Diff.Rear Transv.Lock Rock.Switch2(Rear axle 1) andDiff.Rear Transv.Lock Rock.Switch1(Rear axle 1) are both activated.	2	02			
BC IBC2	2211F	Brake Front Air Pressure Sensor	The acquired voltage is below or above the thresholds(see Figure 8). The error is detected only if there are no errors on the supply voltage of	00 01	01	0.6V<(Vout/Vc)<1V 0.14V<(Vout/Vc)< 0.38V		
			the sensor (Vc).	03 04	03 04			
			[Vout/vc]=0.08+0.04*(Bar+1) Vout ->output voltage of the sensor; Vc -> supply voltage of the sensor: Bar -> relative to atmospheric pressure					
BC IBC2	22120	Brake Rear Air Pressure Sensor	The acquired voltage is below or above the thresholds(see Figure 8). The error is detected only if there are no errors on the supply voltage of	00 01	01	0.6V<(Vout/Vc)<1V 0.14V<(Vout/Vc)< 0.38V		
			the sensor (Vc).	03 04	03 04			
			(Vout/Vc)=0.08+0.04*(Bar+1) Vout ->output voltage of the sensor; Vc -> supply voltage of the sensor: Bar -> relative to atmospheric pressure					
		1			1			

ECU Name	SPN [Hex]	Fault Component	Description	FMI [DEC]	FMI [HEX]	FMI Description	Lamp status	Comment
BC IBC2	2212B	Brake Air Pressure Sensor Supply (Vc)	The acquired supply voltage is below or above the thresholds.	00	00	6V <v<8v< td=""><td>Status</td><td></td></v<8v<>	Status	
				01 03		2V <v<4v V>8V</v<4v 		
DO IDOS	00400	V. I	N ON OTHER TO	04	04	V<2V		
BC IBC2	2212C	Vehicle data bus CAN	No CAN messages on Vehicle data bus or Bus-Off detection. The error can be read on CAN only if the CAN bus resets	2	02			
BC IBC2	2212D	ECU not programmed	,	31	1F			
BC IBC2	22130	Engine Starter		03 04	04	Voltage Above Normal, Or Shorted To High Source Voltage Below Normal, Or Shorted To Low Source		
BC IBC2	22131	Cabin Side White Lights (only if on pin E03)		03 04		Voltage Above Normal, Or Shorted To High Source Voltage Below Normal, Or Shorted To Low Source		
BC IBC3	22100	ECU not programmed		31	1F	Voltage Below Hormal, Or Shorted To Low Source	Yellow	
BC IBC3 BC IBC3	22101 22102	EEPROM checksum error ECU Overheating	The PCB ECU Temperature of the output drivers is greater than max.	12 13	0C 0D		Yellow Yellow	
		_	allowed temperature (100°C).					
BC IBC3	22103	ECU Secondary Microprocessor Faulty	The secondary microprocessor that executes the limp-home function is faulty	14	0E		Yellow	
BC IBC3	2210B	Vehicle Data Bus CAN	No CAN messages on Vehicle data bus or Bus-Off detection.	2	02		Red	
BC IBC3	2210C	Body Control Bus CAN	The error can be read on VDB CAN only if the VDB CAN bus resets No CAN messages on Body control bus or Bus-Off detection.	2	02		Red	
		-	The error can be read on BCB CAN also if the BCB CAN bus is not reset					
BC IBC3	231FF	Body Control Bus - ECU#1 CAN	No CAN messages from ECU#1 - Bed Module	2	02		Yellow	
BC IBC3 BC IBC3	2ECFF 2EDFF	Body Control Bus - ECU#2 CAN Body Control Bus - ECU#3 CAN	No CAN messages from ECU#2 - Driver Door Module No CAN messages from ECU#3 - Co-Driver Door Module	2	02 02		Yellow Yellow	
BC IBC3	245FF	Body Control Bus - ECU#4 CAN	No CAN messages from ECU#4 - Additional Heater Air	2	02		Yellow	
BC IBC3 BC IBC3	244FF 2E9FF	Body Control Bus - ECU#5 CAN Body Control Bus - ECU#6 CAN	No CAN messages from ECU#5 - Additional Heater Water No CAN messages from ECU#6 - Mirror Controller	2	02 02		Yellow Yellow	
BC IBC3	26DFF	Body Control Bus - ECU#7 CAN	No CAN messages from ECU#7 - MET	2	02		Red	
BC IBC3 BC IBC3	219FF 22120	Body Control Bus - ECU#8 CAN Fuel Level Interface	No CAN messages from ECU#8 - Climate Control Fuel Level interface failure detected.	2 00	02	00:Delta voltage below normal	Yellow Yellow	
20.200			The input voltage is evaluated for in-range checking:	01	01	01:Delta voltage above normal		
BC IBC3	22121	Engine Oil Level Interface	Oil Level interface failure detected.	00	00	00:Delta voltage below normal	Yellow	
			The voltage difference between the first and the second acquisition are evaluated for in-range checking:	01 0F		01:Delta voltage above normal 0F:Time/Date from TCO not available		
			evaluated for in-range checking.	10	10	10:Engine Starter Mode or Engine Speed from EDC not available		
				12 13	12 13	12:Date could not be stored in EEPROM 13:Time could not be stored in EEPROM		
				14	14	14:Oil Level could not be stored in EEPROM		
BC IBC3	22122	Ambient Air Temperature Interface	Ambient Air Temperature interface failure detected.	03	03	03:Voltage above normal (s.c. to battery or open circuit)	Yellow	
20 1003		a remperature interiace	The input voltage is evaluated for in-range checking:	03		04:Voltage below normal (s.c. to battery or open circuit)	. 511044	
BC IBC3	22130	Windshield Wiper Switches	Windshield Wiper switches activated at the same time or every faulty on	2	02		Yellow	
			Windshield Wiper (engine blocked or short circuited, engine interrupted,		-			
BC IBC3	22131	Diff.Lock.State. Rear Axle1(Rockwell)	cam always to ground, cam always open) Diff.Lock.State. Rear Axle1-In1 and Diff. Lock State Rear Axle1-In2, are	2	02		Yellow	
BC IBC3	22140	Switches Service Brake Air Pressure Circuit#2 sensor	both activated			03:Voltage above normal (s.c. to battery or open circuit)		
		(Front)		03 04	04	04:Voltage below normal (s.c. to ground)	Yellow	
BC IBC3	22141		Service Brake Air Pressure Circuit#1 interface failure detected.	03 05	03	4:Voltage above normal (s.c. to battery or open circuit) 04:Voltage below normal (s.c. to ground)	Yellow	
BC IBC3	22142	Service Brake Air Pressure Circuit#2 sensor	The pressure charging is evaluated for in-range checking	00	00	00:Delta voltage below normal	Red	
BC IBC3	22143	(Front)	The pressure charging is evaluated for in-range checking	01	01	01:Delta voltage above normal 00:Delta voltage below normal	Red	
		(Rear)		01	01	01:Delta voltage above normal		
BC IBC3	22144	Service Brake Air Pressure Sensor Supply Voltage (Vs)	Service Brake Air Pressure Sensor Supply Voltage failure detected. The error is detected only when the maximum supply voltage is between	00 01		00: 6V <v<8v 01: 2V<v<4v< td=""><td>Yellow</td><td></td></v<4v<></v<8v 	Yellow	
			18V and 32V and Ignition Key 15 is On.	03	03	03: V>8V		
BC IBC3	22145	Brake Air Dryer	Pressure plausability:	04 01		04: V<2V 01:The pressure is not increasing while charge mode	Yellow	
20.200	22.10	State 7 th 51 yes	1 receive placed my.	00	00	00:The pressure is not decreasing while rigeneration mode		
BC IBC3	22150	Dashboard Backlight & Headbeam Washer	On/Off Diagnostic:	02 6		02:Duty error (air loss because the S2 valve is locked) 06:Short circuit to ground or Overload or Overheating protection.	Yellow	
		Supply & Body Builders Parking Lights						
BC IBC3	22161	Marker Front Left & Right Lights	Analog Diagnostic: The acquired load current is below the threshold (at	5	05	05: I < IS	Yellow	
			least a load on two is a open circuit).					
			The error is detected only when the relative supply voltage is between 18V and 32V.					
			The Marker Front Left & Right Lights fault shall be recognized, stored and reported on DM1 message with a maximum delay of 10sec.					
BC IBC3	22166	Additional Lights or Additional Air Heater	On/Off Diagnostic:	03	03	03:Short circuit to battery	Yellow	
		Disable		06	06	06:Short circuit to ground or Overload or Overheating protection		
BC IBC3	22163	Step Lights	Analog Diagnostic: The acquired load current is below the threshold (at	5	05	05: I < IS	Yellow	
			least a load on two is a open circuit). The error is detected only when the relative supply voltage is between 18V					
			and 32V.					
			The Step Lights fault shall be recognized, stored and reported on DM1 message with a maximum delay of 10sec.					
BC IBC3	22164	Cabin Side Lights	On/Off Diagnostic:	03 06		03:Short circuit to battery 06:Short circuit to ground or Overload or Overheating protection	Yellow	
BC IBC3	22165	Cabin Ceiling Lights	Analog Diagnostic: The acquired load current is below the threshold (at least a load on two is a open circuit).	5	05	05: I < IS	Yellow	
			The error is detected only when the relative supply voltage is between 18V					
			and 32V. The Cabin Ceiling Lights fault shall be recognized, stored and reported on					
BC IBC3	22180	30A	DM1 message with a maximum delay of 10sec. On/Off Diagnostic:	4	04	Voltage below normal	Yellow	
BC IBC3	22181	30B	On/Off Diagnostic:	4	04	Voltage below normal	Yellow	
BC IBC3 BC IBC3	22182 22183	30C 30D	On/Off Diagnostic: On/Off Diagnostic:	4		Voltage below normal Voltage below normal	Yellow Yellow	
BC IBC3	22184	30E	On/Off Diagnostic:	4	04	Voltage below normal	Yellow	
BC IBC3	22190	+Batt. TCO & +Batt. Spare1	On/Off Diagnostic: The internal fuse to ECU can be accidentally interrupted	5	05	Fuse interrupted	Yellow	
BC IBC3	22191	30A Cluster	On/Off Diagnostic: fuse interrupped The internal fuse to ECU can be accidentally interrupted	5	05	Fuse interrupted	Yellow	
BC IBC3	22192	30D Body Builders	On/Off Diagnostic: fuse interrupped	5	05	Fuse interrupted	Yellow	
BC IBC3	22193	30E ECAS	The internal fuse to ECU can be accidentally interrupted On/Off Diagnostic: fuse interrupped	5	05	Fuse interrupted	Yellow	
			The internal fuse to ECU can be accidentally interrupted			·		
BC IBC3	22194	30C VCM	On/Off Diagnostic: fuse interrupped The internal fuse to ECU can be accidentally interrupted	5		Fuse interrupted	Yellow	
BC IBC3	22195	30E Cigarette Lighter & 30E Diagnostic Connector	On/Off Diagnostic: fuse interrupped The internal fuse to ECU can be accidentally interrupted	5	05	Fuse interrupted	Yellow	
BC IBC3	22196	30C ABS	On/Off Diagnostic: fuse interrupped	5	05	Fuse interrupted	Yellow	
BC IBC3	22197	30C ABS Trailer	The internal fuse to ECU can be accidentally interrupted On/Off Diagnostic: fuse interrupped	5	05	Fuse interrupted	Yellow	
			The internal fuse to ECU can be accidentally interrupted			·		
BC IBC3	22198	30B Engine Crank	On/Off Diagnostic: fuse interrupped The internal fuse to ECU can be accidentally interrupted	5	05	Fuse interrupted	Yellow	
BC IBC3	22199	30D Acustic Horn	On/Off Diagnostic: fuse interrupped	5	05	Fuse interrupted	Yellow	
BC IBC3	2219A	30E Voltage Adapter & 30E Bed Lights	The internal fuse to ECU can be accidentally interrupted On/Off Diagnostic: fuse interrupped	5	05	Fuse interrupted	Yellow	
BC IBC3	2219B	30B Mirror Heating	The internal fuse to ECU can be accidentally interrupted On/Off Diagnostic: fuse interrupped	5	05	Fuse interrupted	Yellow	
		-	The internal fuse to ECU can be accidentally interrupted			·		
BC IBC3	221A0	15 Mirror Controller & 15 Heated Dryer	On/Off Diagnostic: fuse interrupped The internal fuse to ECU can be accidentally interrupted	5	05	Fuse interrupted	Yellow	
BC IBC3	221A1	15 Alternator	On/Off Diagnostic: fuse interrupped The internal fuse to ECU can be accidentally interrupted	5	05	Fuse interrupted	Yellow	
BC IBC3	221A2	15 TCO & 15 Cluster & 15 MET & 15 UDS	On/Off Diagnostic: fuse interrupped	5	05	Fuse interrupted	Yellow	
BC IBC3	221A3	15 VCM & 15 ECM	The internal fuse to ECU can be accidentally interrupted On/Off Diagnostic: fuse interrupped	5	05	Fuse interrupted	Yellow	
			The internal fuse to ECU can be accidentally interrupted			·		
BC IBC3		15 ECAS & 15 ABS	On/Off Diagnostic: fuse interrupped The internal fuse to ECU can be accidentally interrupted	5		Fuse interrupted	Yellow	
BC IBC3	221A5	15 Cabin Tilted & 15 Brake Switch & 15 Headbeam Pot.Supply	On/Off Diagnostic: fuse interrupped The internal fuse to ECU can be accidentally interrupted	5	05	Fuse interrupted	Yellow	
BC IBC3	221A6	15/1A Reverse Gear Lights & 15/1A	On/Off Diagnostic: fuse interrupped	5	05	Fuse interrupted	Yellow	
		sensor supply	· ·	L	L			
BC IBC3	221A7	15/1A Cabin Heater & 15/1A Conditioner	On/Off Diagnostic: fuse interrupped	5	05	Fuse interrupted	Yellow	
BC IBC3	221A8	15/1B Body Builders	The internal fuse to ECU can be accidentally interrupted On/Off Diagnostic: fuse interrupped	5	05	Fuse interrupted	Yellow	
BC IBC3	221A9	15/1B Electric Windows	The internal fuse to ECU can be accidentally interrupted On/Off Diagnostic: fuse interrupped	5		Fuse interrupted	Yellow	
			The internal fuse to ECU can be accidentally interrupted			·		
BC IBC3	221B0	Power Steering Circuit #1 or #2 Pressure Low	Sensor plausibility: - While Engine Speed=0 (and valid) at least one of two pressure switches	2	02	Flow meter plausibility	Yellow	
			is in Normal state (open) (pressure above threshold)					
			The ECU waits PSC_TEST_T1 (after Engine Speed =0 or at Ignition Key 15) before to start the diagnostics	L	L			
BC IBC3	221B2	Steering Flow Meter	Flow meter plausibility: - When Vehicle Speed < PSC_VEH_SPEED_MIN the flow is in Normal	2	02	Flow meter plausibility	Yellow	
		lun data da	state (open)					
BC IBC3	221C0	Windshield Washer & Headbeam Washer	On/Off Diagnostic:	03 06		03:Short circuit to battery 06:Short circuit to ground or Overload or Overheating protection	Yellow	
DO 17.0	00101	TOCON	On/Off Diagnostic				V-"	
BC IBC3	221C1	TGC ON	On/Off Diagnostic:	03 06		03:Short circuit to battery 06:Short circuit to ground or Overload or Overheating protection	Yellow	
BC IBC3	221C2	TGC OFF	On/Off Diagnostic:				Vollar	
			On/Off Diagnostic:	3		03:Short circuit to battery	Yellow	
BC IBC3	221C3	Body Builder Reverse Gear	On/Off Diagnostic:	03 06		03:Short circuit to battery 06:Short circuit to ground or Overload or Overheating protection	Yellow	
				50	50	2.1.2.1.01. 0.1.03.1.1.0 ground or overload or overheating protection		

FOU	CDN	F	Description	FMI	FMI	- FMI	1	2
ECU Name	SPN [Hex]	Fault Component	Description	[DEC]	[HEX]	Description	Lamp status	Comment
BC IBC3	221C4	Vehicle Running	On/Off Diagnostic:	03 06	03 06	03:Short circuit to battery 06:Short circuit to ground or Overload or Overheating protection	Yellow	
BC IBC3	221C5	Engine Running	On/Off Diagnostic:	03	03	03:Short circuit to battery	Yellow	
			,	06	06	06:Short circuit to ground or Overload or Overheating protection		
BC IBC3	221C6	Roof Hatch opening	On/Off Diagnostic:	03 06	03 06	03:Short circuit to battery 06:Short circuit to ground or Overload or Overheating protection	Yellow	
BC IBC3	221C7	Roof Hatch closing	On/Off Diagnostic:	03		4:Short circuit to battery	Yellow	
B0 1B00	22107	Tool Hateli Globing	Shirth Diagnostic.	07	07	06:Short circuit to ground or Overload or Overheating protection	1 Cilow	
BC IBC3	221C8	Headlights Washer	On/Off Diagnostic:	03 08	03 08		Yellow	
BC MET	26D01	EEPROM checksum error		12	0C	oc. Short circuit to ground or overload or overheating protection	Yellow	
BC MET		ECU Overheating	The PCB ECU Temperature of the output drivers is greater than max. allowed temperature (100°C).	12	0C		Yellow	
BC MET	26D03	ECU Secondary Microprocessor Faulty	The secondary microprocessor that executes the limp-home function is	12	0C		Yellow	
BC MET	26D0C	Body Control bus CAN	faulty No CAN messages on Body Control bus or Bus-Off detection.	2	02		Red	
BC MET	26D20	Fuel Level sensor	The error can be read on BCB CAN only if the BCB CAN bus resets Fuel Level interface failure detected.	03	03	03:Voltage above normal (s.c. to battery)	Yellow	
			The input voltage is evaluated for Phisically possible range:	04	04	04:Voltage below normal (s.c. to ground). Only when the current is sensed on the Low Side		
BC MET	26D21	Engine Oil Level Sensor	Oil level interface failure detected. The input voltage is evaluated for Phisically possible range:	03 04	03 04	03:Voltage above normal (s.c. to battery) 04:Voltage below normal (s.c. to ground)	Yellow	
BC MET	26D51	Parking Left &	Analog Diagnostic:	6	06	06:short circuit to ground or Overload or Overheating protection	Yellow	
		Right Front Lights & Parking Rear Left Lights &	The error is detected only when the relative supply voltage is between 18V and 32V.					
		Marker Rear Left & Right Lights &						
BC MET	26D52	Trailer Parking Lights Left Parking Left & Right	Analog Diagnostic: The acquired load current is below the threshold.	5	05	05: I < IS	Yellow	
		Front Lights	The error is detected only when the relative supply voltage is between 18V and 32V.					
BC MET	26D53	Parking Rear Left Lights	Analog Diagnostic: The acquired load current is below the threshold. The error is detected only when the relative supply voltage is between 18V	5	05	05: I < IS	Yellow	
BC MET	26D54	Parking Rear Right Lights	and 32V. Analog Diagnostic: The acquired load current is below the threshold.	5	05	05: I < IS	Yellow	
			The error is detected only when the relative supply voltage is between 18V and 32V.					
BC MET	26D55	Parking Rear Right Lights & Plate Left &	Analog Diagnostic: The error is detected only when the relative supply voltage is between 18V	6	06	06:short circuit to ground or Overload or Overheating protection	Yellow	
		Right Lights & Trailer Parking Lights Right	and 32V.					
BC MET	26D56	Rear Fog Left & Right Lights	Analog Diagnostic: The acquired load current is below the threshold. The error is detected only when the relative supply voltage is between 18V	5	05	05: I < IS	Yellow	
BC MET	26D57	Rear Fog Left &	and 32V. Analog Diagnostic:	5	05	06:short circuit to ground or Overload or Overheating protection	Yellow	
		Right Lights & Trailer Rear Fog Left &	The error is detected only when the relative supply voltage is between 18V and 32V.			3 Community processor		
BC MET	26D58	Right Lights Stop Light Left	Analog Diagnostic: The acquired load current is below the threshold.	5	05	05: I < IS	Yellow	
JO WILT	2000		The error is detected only when the relative supply voltage is between 18V and 32V.		00		. SIIOW	
BC MET	26D59	Stop Light Right	Analog Diagnostic: The acquired load current is below the threshold. The error is detected only when the relative supply voltage is between 18V	5	05	05: I < IS	Yellow	
BC MET	26D5A	Stop Light Left &	and 32V. Analog Diagnostic:	6	06	06:short circuit to ground or Overload or Overheating protection	Yellow	
JO WILT	LUDUA	Stop Light Right & Trailer Stop Left &	The error is detected only when the relative supply voltage is between 18V and 32V.		- 50	S ground of Overheading protection	. SIIOW	
BC MET	26D5B	Right Lights Front Fog Left & Right Lights	On/Off Diagnostic:	6	06	06:short circuit to ground or Overload or Overheating protection	Yellow	
DO MET	20000	Tront Fog Lott & right Lights	The error is detected only when the relative supply voltage is between 18V and 32V.		00	obstruct and at a ground of overload of overload of	TCIIOW	
BC MET	26D5C	Low Beam Light Left	On/Off Diagnostic:	05 06	05 06	05:Open load 06:Short circuit to ground or Overload or Overheating protection	Yellow	
BC MET	26D5D	Low Beam Light Right	On/Off Diagnostic:	05	05	-	Yellow	
DO MET	20000	Low Boarn Light Night	Short Blaghestic.	06	06	06:Short circuit to ground or Overload or Overheating protection	TCIIOW	
BC MET	26D5E	High Beam Light Left	On/Off Diagnostic:	05 06	05 06	05:Open load 06:Short circuit to ground or Overload or Overheating protection	Yellow	
BC MET	26D5F	High Beam Light Right	On/Off Diagnostic:	05		05:Open load	Yellow	
50 m21	2020.	Tight 250m Light ragin	S. S	06			10.1011	
BC MET	26D60	Plate Left & Right Lights	Analog Diagnostic: The acquired load current is below the threshold. The error is detected only when the relative supply voltage is between 18V	5	05	05: I < IS	Yellow	
BC MET	26D62	Marker Rear Left & Right Lights	and 32V. Analog Diagnostic: The acquired load current is below the threshold.	5	05	05: I < IS	Yellow	
50 m21	20202	Than or risal 25% a riight Eight	The error is detected only when the relative supply voltage is between 18V and 32V.				10.1011	
BC MET	26D68	Turn Right Lights	Analog Diagnostic: The acquired load current is below the threshold. The error is detected only when the relative supply voltage is between 18V	5	05	05: I < IS	Yellow	
BC MET	26D69	Trailer Turn Lights Right	and 32V. On/Off Diagnostic:	5	05	05: I < IS	Yellow	
			The error is detected only when all the lamps are open circuit and the relative supply voltage is between 18V and 32V.					
BC MET	26D6A	Turn & Trailer Turn Right Lights	On/Off Diagnostic: The error is detected only when the relative supply voltage is between 18V	5	05	06: Short circuit to ground or Overload or Overheating protection	Yellow	
BC MET	26D6B	Turn Left Lights	and 32V. Analog Diagnostic: The acquired load current is below the threshold.	5	05	05: I < IS	Yellow	
		-	The error is detected only when the relative supply voltage is between 18V and 32V.					
BC MET	26D6C	Trailer Turn Lights Left	On/Off Diagnostic: The error is detected only when all the lamps are open circuit and the	5	05	5: I< IS	Yellow	
BC MET	26D6D	Turn & Trailer Turn Left Lights	relative supply voltage is between 18V and 32V. On/Off Diagnostic:	6	06	Is =40mA 06: Short circuit to ground or Overload or Overheating protection	Yellow	
			The error is detected only when the relative supply voltage is between 18V and 32V.					
BC MET	26D6E	Trailer Stop Left & Right Lights	Analog Diagnostic: The acquired load current is below the threshold (see Figura 2).	5	05	5: I< IS	Yellow	
			The error is detected only when the relative supply voltage is between 18V and 32V.			Is =40mA		
BC MET	26DA1	Ignition Key 15	On/Off Diagnostic:	5	05	06: Short circuit to ground or Overload or Overheating protection	Yellow	
BC MET		Body Builder &Trailer A-A8+P-A1 output	On/Off Diagnostic:	5		06: Short circuit to ground or Overload or Overheating protection	Yellow	
BC MET		A-B1 output	On/Off Diagnostic:	5	05	06: Short circuit to ground or Overload or Overheating protection	Yellow	
BC MET	26DC3	Headbeam Adjustment	On/Off Diagnostic:	03		03:Short circuit to battery	Yellow	
				06	06	06:Short circuit to ground (with Hheadbeam Adjustment Position > 4%)		
BC MET BC MET		A-C1 output C-A1 output	On/Off Diagnostic: On/Off Diagnostic:	5 05	05	06:short circuit to ground or Overload or Overheating protection 05: Open load	Yellow Yellow	
				06 03	06 03	06: Short circuit to ground or Overload or Overheating protection 03: Short circuit to battery		
BC MET	26DC9	C-A2 output	On/Off Diagnostic:	05		05: Open load	Yellow	
				06 03	06 03	06: Short circuit to ground or Overload or Overheating protection 03: Short circuit to battery		
BC MET	26DCA	C-A3 output	On/Off Diagnostic:	05		05: Open load	Yellow	
				06 03		Short circuit to ground or Overload or Overheating protection Short circuit to battery		
BC MET	26DCD	C-A4 output	On/Off Diagnostic:	05		05: Open load	Yellow	
				06 03		06: Short circuit to ground or Overload or Overheating protection 03: Short circuit to battery		
BC MET	26DCE	C-A5 output	On/Off Diagnostic:	05		05: Open load	Yellow	
				06 03		06: Short circuit to ground or Overload or Overheating protection 03: Short circuit to battery		
CLC	41905	Solar Sensor		04		04: Short circuit to ground	Yellow	
CLC	41906	Indoor temperature sensor		05 04 05	04	05: Open load or short cricuit to battery 04: Short circuit to ground 05: Open load or short cricuit to battery	Yellow	
CLC	41907	Evaporator temperature sensor		05 04 05	04	05: Open load or short cricuit to battery 04: Short circuit to ground 05: Open load or short cricuit to battery	Yellow	
CLC	41908	Heater exchanger temperature sensor		04	04	05: Open load or short cricuit to battery 04: Short circuit to ground 05: Open load or short cricuit to battery	Yellow	
CLC	41901	Feedback signal floor flap		05 04 05	04	05: Open load or short cricuit to battery 04: Short circuit to ground 05: Open load or short cricuit to battery	Yellow	
CLC	41902	Feedback signal defrost flap		05 04 05	04	05: Open load or short cricuit to battery 04: Short circuit to ground 05: Open load or short cricuit to battery	Yellow	
CLC	41903	Feedback signal bilevel flap		05 04 05	04	Us: Open load or snort cricuit to battery 04: Short circuit to ground 05: Open load or short cricuit to battery	Yellow	
CLC	41904	Feedback signal recirculation flap		05 04 05	04	04: Short circuit to battery 04: Short circuit to ground 05: Open load or short circuit to battery	Yellow	
CLC CLC	41914 4190E	Sensor fan diagnosis Heating valve		05 07 04	07	us: Open load or short circuit to battery Faulty feedback from fan motor 04: Short cricuit to ground	Yellow Yellow	
OLO	-100E			03 07	03	03: Short circuit to ground 03: Short circuit to battery 07: Flap is not moving	. CHOW	
CLC	41910	Floor flap motor		04 03	04	04: Short cricuit to battery	Yellow	
				07		07: Flap is not moving		

Name CLC	SPN [Hex] 41911	Fault Component Defrost flap motor	Description	FMI [DEC]		FMI Description 04: Short cricuit to ground	Lamp status Yellow	Comment
CLC	41911	Demost nap motor		03 07		03: Short circuit to battery 07: Flap is not moving	reliow	
CLC	41912	Bilevel flap motor		04 03	03	04: Short cricuit to ground 03: Short circuit to battery	Yellow	
CLC	41913	Recirculation flap motor		07 04 03	04	07: Flap is not moving 04: Short cricuit to ground 03: Short circuit to battery	Yellow	
CLC	4190D	Compressor clutch relais		03 07 04	07	07: Flap is not moving Short cricuit to battery	Yellow	
CLC CLC	4190F 41915	Sensor fan Blower control voltage		04 04	04 04	Short cricuit to ground 04: Short cricuit to ground	Yellow Yellow	
CLC CLC	41916	BCB data link		03 25	19	03: Short circuit to battery Bus Rx access error	Yellow	
DR ZF EST42	41917 41001	BCB data link Short-circuit to ground on "accumulator charge valve" output (AD1)	Shorted to low source	02 5	05	Bus Tx access error	Yellow	
DR ZF EST42	41002	Short-circuit to positive on "accumulator charge valve" output (AD1)	Shorted to high source	6	06			
DR ZF EST42	41003	Interrupt on "accumulator charge valve" output (AD1)	Disconnection	10	0A			
DR ZF EST42	41007	Short-circuit to ground on "Intarder pilot lamp" output (AD2) – only without MUX	Shorted to low source	5	05			
DR ZF EST42	41008 41009	Short-circuit to positive on "Intarder pilot lamp" output (AD2) – only without MUX Interrupt on "Intarder pilot lamp" output	Shorted to high source Disconnection	6	06 0A			
DR ZF EST42	41016	(AD2) – only without MUX Short-circuit to ground on "braking level	Shorted to low source	5	05			
		selector supply" output- only without MUX						
DR ZF EST42	41017	Short-circuit to positive on "braking level selector supply" output— only without MUX	Shorted to high source	6	06			
DR ZF EST42	41019	Short-circuit to ground on "proportional valve" output (AIP)	Shorted to low source	5	05			
DR ZF EST42	4101A	Short-circuit to positive on "proportional valve" output (AIP)	Shorted to high source	6	06			
DR ZF EST42	4101B	Interrupt on "proportional valve" output (AIP)	Disconnection	10	0A			
DR ZF EST42	4101C	Resistance error on "proportional valve" output (AIP)	Device error	9	09			
DR ZF EST42	4101D	Short-circuit to ground on "proportional valve ground feedback" output (ADM1)		5	05			
DR ZF EST42	4101E 41022	Short-circuit to positive on "proportional valve ground feedback" output (ADM1) Speed sensor failure on output shaft	Shorted to high source No signal	6	06			
DR ZF EST42	41022	(interruption) Temperature sensor interrupt	Disconnection	10				
DR ZF EST42 DR ZF EST42	41026 41027	Temperature sensor short-circuit Below minimum threshold of readback	General short Below min. threshold	7 2	07 02			
DR ZF EST42	41028	Above maximum threshold of readback	Above max. threshold	1	01			
DR ZF EST42 DR ZF EST42	41029 4102A	current on "proportional valve" output Vehicle circuit interruption (terminal 30) Vehicle circuit overvoltage (terminal 15)	Disconnection Above max. threshold	10	0A 01			
DR ZF EST42 DR ZF EST42 DR ZF EST42	4102A 4102B 4102C	Vehicle circuit overvoltage (terminal 15) Vehicle circuit undervoltage (terminal 15) "Braking level selector" error (without	Above max. threshold Below min. threshold Not plausible	2 3	01 02 03			
		MUX)Braking level from BC_DR CAN message not correct (with MUX)						
DR ZF EST42 DR ZF EST42	4102D 4102E	End-of-line parameter not valid "Operating hours counter" loss	No fault symptom No fault symptom	0				
DR ZF EST42 DR ZF EST42 DR ZF EST42	4102F 41031 41033	"Error memory" loss CAN-message EEC2 failure (SAE J1939) System error of ECU	No fault symptom No signal No fault symptom	0 4 0	00 04 00			
DR ZF EST42 DR ZF EST42	41033 41034 41035	CAN-message TSC1 failure (SAE J1939) CAN transmit error	No signal No fault symptom	4 0	00 04 00			
DR ZF EST42 DR ZF EST42	41036 41038	CAN-BusOff CAN-AcknowledgeError	Device error No fault symptom	9	09			
DR ZF EST42 DR ZF EST42	41039 4103E	CAN-message EEC1 failure (SAE J1939) CAN-message CCVS failure (SAE J1939)	No signal No signal	4	04 04			
DR ZF EST42	4103F	CAN-message ERC1_ER failure (SAE J1939) CAN-message ETC1 failure (SAE J1939)	No signal	4	04			
DR ZF EST42 DR ZF EST42 DR ZF EST42	41040 41042 41051	CAN-message ETC Failure (SAE J1939) CAN-message BC_DR timeout	No signal No signal	4 4	04 04 04			
EDC7C1	20001	Acceleration Pedal	, to og. d.	00 01		Above Normal Below Normal		
				02 03	02 03	Not Plausible SRC_HIGH / SRC_UMAX		
				04 12	04 0C	SRC_LOW / SRC_UMIN NO_SIGNAL / SRC_UOPEN		
ED 0= - :					4 🗆			
EDC7C1 EDC7C1	20002	Acceleration Pedal Selftest Shutoff Path (Start Up)		31	1F	All other faults (if any)		
EDC7C1 EDC7C1 EDC7C1 EDC7C1	20002 20003 20004 20005	Acceleration Pedal Selftest Shutoff Path (Start Up) Ambient Air Pressure Sensor not used			1F	All other faults (if any)		
EDC7C1 EDC7C1 EDC7C1 EDC7C1 EDC7C1	20003 20004 20005 20006 20007	Selftest Shutoff Path (Start Up) Ambient Air Pressure Sensor not used Battery Voltage Boost Air Pressure			1F	All other faults (if any)		
EDC7C1 EDC7C1 EDC7C1 EDC7C1 EDC7C1 EDC7C1 EDC7C1	20003 20004 20005 20006 20007 20008 20009	Selftest Shutoff Path (Start Up) Ambient Air Pressure Sensor not used Battery Voltage Boost Air Pressure Boost Air Temperature Sensor Boost Pressure Regulation			1F	All other faults (if any)		
EDC7C1	20003 20004 20005 20006 20007 20008 20009 2000A 2000B	Selftest Shutoff Path (Start Up) Ambient Air Pressure Sensor not used Battery Voltage Boost Air Pressure Boost Air Temperature Sensor Boost Pressure Regulation Booster Voltage Booster Voltage Booster Voltage Booster Voltage			1F	All other faults (if any)		
EDC7C1 EDC7C1 EDC7C1 EDC7C1 EDC7C1 EDC7C1 EDC7C1 EDC7C1 EDC7C1 EDC7C1 EDC7C1 EDC7C1 EDC7C1 EDC7C1 EDC7C1	20003 20004 20005 20006 20007 20008 20009 2000A 2000B 2000C 2000C 2000D	Selftest Shutoff Path (Start Up) Ambient Air Pressure Sensor not used Battery Voltage Boost Air Pressure Boost Air Temperature Sensor Boost Pressure Regulation Booster Voltage			1F	All other faults (if any)		
EDC7C1	20003 20004 20005 20006 20007 20008 20009 2000A 2000B 2000C 2000D 2000E 2000F 2000F	Selftest Shutoff Path (Start Up) Ambient Air Pressure Sensor not used Battery Voltage Boost Air Pressure Boost Air Temperature Sensor Boost Pressure Boost Pressure Regulation Booster Voltage Booster Voltage Booster Voltage C2 Truck Security System Turbo Speed Vehicle Speed Clutch Switch Coolant Temperature Sensor			1F	All other faults (if any)		
EDC7C1	20003 20004 20006 20006 20007 20008 20009 2000A 2000B 2000C 2000D 2000E 2000F 20010 20011 20012	Selftest Shutoff Path (Start Up) Ambient Air Pressure Sensor not used Battery Voltage Boost Air Pressure Boost Air Pressure Boost Air Pressure Boost Pressure Boost Pressure Boost Poltage Booster Voltage Booster Voltage Booster Voltage C2 Truck Security System Turbo Speed Vehicle Speed Clutch Switch Coolant Temperature Sensor Cruise Control Engine Brake Preselection			1F	All other faults (if any)		
EDC7C1	20003 20004 20005 20006 20007 20008 20009 2000A 2000B 2000C 2000D 2000E 20010 20010	Selftest Shutoff Path (Start Up) Ambient Air Pressure Sensor not used Battery Voltage Boost Air Pressure Sensor Boost Air Temperature Sensor Boost Pressure Regulation Booster Voltage Booster Voltage Booster Voltage Turbus Security System Turbo Speed Vehicle Speed Clutch Switch Coolant Temperature Sensor Cruise Control			1F	All other faults (if any)		
EDC7C1	20003 20004 20005 20006 20007 20008 20009 20000 2000D 2000D 2000F 20011 20012 20012 20014 20015 20015 20015	Selftest Shutoff Path (Start Up) Ambient Air Pressure Sensor not used Battery Voltage Boost Air Temperature Sensor Boost Air Temperature Sensor Boost Air Temperature Sensor Boost Pressure Regulation Booster Voltage Booster Voltage Booster Voltage C2 Truck Security System Turbo Speed Vehicle Speed Clutch Switch Coolant Temperature Sensor Cruise Control Engine Brake Preselection Engine Deed Sensor (Camshaft) Engine Speed Sensor (Camshaft) Engine Speed Sensor (Crankshaft) Fuel Limiting – VGT Overspeed			1F	All other faults (if any)		
EDC7C1	20003 20004 20005 20006 20007 20008 20009 20000 2000D 2000D 2000D 2000D 20011 20011 20013 20014 20014 20015 20017 20017 20017	Selftest Shutoff Path (Start Up) Ambient Air Pressure Sensor not used Battery Voltage Boost Air Temperature Sensor Boost Air Temperature Sensor Boost Pressure Regulation Booster Voltage Booster Voltage Booster Voltage C2 Truck Security System Turbo Speed Vehicle Speed Vehicle Speed Clutch Switch Coolant Temperature Sensor Cruise Control Engine Brake Preselection Engine Overspeed Engine Speed Sensor Engine Speed Sensor (Crankshaft) Fuel Limiting – VGT Overspeed Fuel Pressure Monitoring CP3 Fuel Pressure Sensor			1F	All other faults (if any)		
EDC7C1	20003 20004 20005 20006 20007 20009 20000 20000 20000 20000 20000 20000 20000 20010 20011 20012 20013 20016 20016 20018 20019 20018	Selftest Shutoff Path (Start Up) Ambient Air Pressure Sensor not used Battery Voltage Boost Air Pressure Boost Air Pressure Boost Air Temperature Sensor Boost Pressure Boost Poltage Boost Poltage Booster Voltage Booster Voltage Booster Voltage C2 Truck Security System Turbo Speed Vehicle Speed Clutch Switch Coolant Temperature Sensor Cruise Control Engine Brake Preselection Engine Overspeed Engine Speed Sensor Engine Speed Sensor Crankshaft) Engine Speed Sensor (Crankshaft) Engine Speed Sensor (Crankshaft) Fuel Limiting – VGT Overspeed Fuel Pressure Monitoring CP3 Fuel Pressure Sensor Fuel Temperature Sensor			1F	All other faults (if any)		
EDC7C1	20003 20004 20005 20006 20007 20008 20009 20000 2000D 2000D 2000D 2000F 20011 20012 20014 20015 20015 20017 20018 20018 20018 20018	Selftest Shutoff Path (Start Up) Ambient Air Pressure Sensor not used Battery Voltage Boost Air Pressure Boost Air Pressure Boost Air Temperature Sensor Boost Pressure Boost Poltage Boost Poltage Booster Voltage Booster Voltage Booster Voltage C2 Truck Security System Turbo Speed Vehicle Speed Clutch Switch Coolant Temperature Sensor Cruise Control Engine Brake Preselection Engine Overspeed Engine Speed Sensor Engine Speed Sensor Crankshaft) Engine Speed Sensor (Crankshaft) Engine Speed Sensor (Crankshaft) Fuel Limiting – VGT Overspeed Fuel Pressure Monitoring CP3 Fuel Pressure Sensor Grid Heater Main Relay Monitoring of Pressure Relief Valve Multiple State Switch			1F	All other faults (if any)		
EDC7C1	20003 20004 20005 20006 20007 20008 20009 20000 20000 20000 20000 20001 20011 20012 20013 20014 20015 20016 20017 20018	Selftest Shutoff Path (Start Up) Ambient Air Pressure Sensor not used Battery Voltage Boost Air Perseure Boost Air Temperature Sensor Boost Air Temperature Sensor Boost Pressure Regulation Booster Voltage Booster Voltage C2 Truck Security System Turbo Speed Vehicle Speed Clutch Switch Coolant Temperature Sensor Cruise Control Engine Brake Preselection Engine Overspeed Engine Speed Sensor (Camshaft) Engine Speed Sensor (Camshaft) Fuel Limiting – VGT Overspeed Fuel Pressure Monitoring CP3 Fuel Pressure Sensor Grid Heater Main Relay Monitoring of Pressure Relief Valve Multiple State Switch Oil Pressure Sensor Oil Temperature Sensor Oil Temperature Sensor			1F	All other faults (if any)		
EDC7C1	20003 20004 20005 20006 20007 20008 20009 20000 20000 20000 20000 20001 20011 20012 20011 20013 20014 20015 20016 20017 20018 20018 20019 20010 20011 20011 20011 20011 20011 20011 20011 20011 20011 20011 20011 20011 20011 20011 20011 20011 20011 20011 20011 20012 20012 20012 20020 20020	Selftest Shutoff Path (Start Up) Ambient Air Pressure Sensor not used Battery Voltage Boost Air Temperature Sensor Boost Air Temperature Sensor Boost Air Temperature Sensor Boost Pressure Regulation Booster Voltage Booster Voltage Booster Voltage C2 Truck Security System Turbo Speed Vehicle Speed Clutch Switch Coolant Temperature Sensor Cruise Control Engine Brake Preselection Engine Brake Preselection Engine Speed Sensor Engine Speed Sensor (Crankshaft) Fuel Limiting – VGT Overspeed Fuel Pressure Monitoring CP3 Fuel Pressure Sensor Fuel Temperature Sensor Oil Temperature Sensor Oil Temperature Sensor Power Supply VGT underboost detection			1F	All other faults (if any)		
EDC7C1	20003 20004 20005 20006 20007 20008 20009 20000 20000 20000 20000 20000 20001 20011 20012 20013 20018 20018 20018 20018 20018 20018 20019 20011 20011 20011 20011 20011 20012 20012 20012 20020 20022 20022	Selftest Shutoff Path (Start Up) Ambient Air Pressure Sensor not used Battery Voltage Boost Air Pressure Sensor Boost Air Pressure Boost Air Temperature Sensor Boost Pressure Regulation Booster Voltage Booster Voltage Booster Voltage Booster Voltage C2 Truck Security System Turbo Speed Vehicle Speed Clutch Switch Coolant Temperature Sensor Cruise Control Engine Brake Preselection Engine Overspeed Engine Speed Sensor Engine Speed Sensor (Crankshaft) Engine Speed Sensor (Crankshaft) Engine Speed Sensor (Crankshaft) Fuel Limiting – VGT Overspeed Fuel Pressure Monitoring CP3 Fuel Pressure Sensor Grid Heater Main Relay Monitoring of Pressure Relief Valve Multiple State Switch Oil Pressure Sensor Power Supply VGT underboost detection Selftest Shutoff Path (After Run) Service Brake Switch			1F	All other faults (if any)		
EDC7C1	20003 20004 20005 20006 20007 20008 20009 20000 20000 20000 20000 20001 20001 20011 20012 20013 20014 20015 20016 20016 20016 20017 20018 20028 20028 20028 20028 20028	Selftest Shutoff Path (Start Up) Ambient Air Pressure Sensor not used Battery Voltage Boost Air Temperature Sensor Boost Air Temperature Sensor Boost Pressure Regulation Booster Voltage Booster Voltage Booster Voltage Booster Voltage C2 Truck Security System Turbo Speed Vehicle Speed Clutch Switch Ccolant Temperature Sensor Cruise Control Engine Brake Preselection Engine Brake Preselection Engine Speed Sensor Engine Speed Sensor Lengine Speed Sensor (Crankshaft) Fuel Limiting – VGT Overspeed Fuel Pressure Monitoring CP3 Fuel Pressure Sensor Fuel Temperature Sensor Grid Heater Main Relay Monitoring of Pressure Relief Valve Multiple State Switch Oil Pressure Sensor Oil Temperature Sensor Oil Temperature Sensor Sensor Sensor Sensor Sensor Sensor Oil Temperature Sensor Oil Temperature Sensor Oil Temperature Sensor Sensor Selftest Shutoff Path (After Run) Service Brake Switch CAN A CAN A CAN B BC2EDC1 msg Timeout			1F	All other faults (if any)		
EDC7C1	20003 20004 20005 20006 20007 20008 20009 20000 20000 20000 20001 20001 20011 20012 20013 20014 20015 20016 20017 20018 20018 20018 20018 20018 20019 20010 20010 20010 20010 20010 20010 20010 20010 20010 20020 20021 20022 20023 20024 20026 20027 20028	Selftest Shutoff Path (Start Up) Ambient Air Pressure Sensor not used Battery Voltage Boost Air Perseure Boost Air Temperature Sensor Boost Air Temperature Sensor Boost Air Temperature Sensor Boost Pressure Regulation Booster Voltage Booster Voltage C2 Truck Security System Turbo Speed Vehicle Speed Clutch Switch Coolant Temperature Sensor Cruise Control Engine Brake Preselection Engine Overspeed Engine Speed Sensor (Camshaft) Engine Speed Sensor (Camshaft) Fuel Limiting – VGT Overspeed Fuel Pressure Monitoring CP3 Fuel Pressure Sensor Grid Heater Main Relay Monitoring of Pressure Relief Valve Multiple State Switch Oil Pressure Sensor Oil Temperature Sensor Power Supply VGT underboost detection Selftest Shutoff Path (After Run) Service Brake Switch CAN_A CAN_A CAN_B BCZEDC1 msg Timeout BCCVSV msg Timeout			1F	All other faults (if any)		
EDC7C1	20003 20004 20005 20006 20007 20008 20009 20000 20000 20000 20001 20011 20012 20011 20012 20014 20015 20016 20017 20018 20018 20019 20010 20020 20021 20020 20021 20028 20028 20028	Selftest Shutoff Path (Start Up) Ambient Air Pressure Sensor not used Battery Voltage Boost Air Perseure Boost Air Temperature Sensor Boost Air Temperature Sensor Boost Air Temperature Sensor Boost Pressure Regulation Booster Voltage Booster Voltage Booster Voltage Turbo Speed Gutch Switch Coolant Temperature Sensor Cruise Control Engine Brake Preselection Engine Brake Preselection Engine Speed Sensor Engine Speed Sensor (Cranshaft) Fuel Limiting – VGT Overspeed Fuel Pressure Monitoring CP3 Fuel Pressure Sensor Fuel Temperature Sensor Grid Heater Main Relay Monitoring of Pressure Relief Valve Multiple State Switch Oil Pressure Sensor Oil Temperature Sensor Oil Temperature Sensor Oil Temperature Sensor Oil Temperature Sensor Fuel Pressure Monitoring CP3 Fuel Pressure Sensor Fuel Temperature Sensor Fuel Temperature Sensor Oil Temperature Sensor Oil Temperature Sensor Oil Temperature Sensor Power Supply VGT underboost detection Selftest Shutoff Path (After Run) Service Brake Switch CAN_A CAN_B BC2EDC1 msg Timeout EBC1 msg Timeout EBC1 msg Timeout ETC1 msg Timeout			1F	All other faults (if any)		
EDC7C1	20003 20004 20005 20006 20007 20008 20008 20009 20006 20007 20008 20008 20001 20011 20011 20011 20011 20011 20014 20015 20016 20017 20018 20016 20017 20018 20018 20019 20010 20010 20010 20010 20010 20010 20020 20020 20028 20028 20028	Selftest Shutoff Path (Start Up) Ambient Air Pressure Sensor not used Battery Voltage Boost Air Perseure Boost Air Temperature Sensor Boost Pressure Regulation Booster Voltage Booster Voltage Booster Voltage Booster Voltage C2 Truck Security System Turbo Speed Vehicle Speed Vehicle Speed Clutch Switch Coolant Temperature Sensor Cruise Control Engine Brake Preselection Engine Brake Preselection Engine Speed Sensor Engine Speed Sensor (Camshaft) Engine Speed Sensor (Camshaft) Fuel Limiting – VGT Overspeed Fuel Pressure Monitoring CP3 Fuel Pressure Sensor Fuel Temperature Sensor Grid Heater Main Relay Monitoring of Pressure Relief Valve Multiple State Switch Oil Pressure Sensor Oil Temperature Sensor Oil Temperature Sensor Oil Temperature Sensor Oil Temperature Sensor Selftest Shutoff Path (After Run) Service Brake Switch CAN_A CAN_B BC2EDC1 msg Timeout BC1CO1 msg Timeout ETC1 msg Timeout			1F	All other faults (if any)		
EDC7C1	20003 20004 20005 20006 20007 20008 20009 20008 20009 20006 20007 20008 20001 20011 20011 20011 20011 20013 20014 20014 20015 20017 20018 20016 20017 20018 20019 20010 20010 20010 20010 20010 20010 20020 20020 20028 20028 20028 20028 20028 20028 20028 20028 20028 20028 20028 20028 20028	Selflest Shutoff Path (Start Up) Ambient Air Pressure Sensor not used Battery Voltage Boost Air Perseure Boost Air Temperature Sensor Boost Pressure Regulation Booster Voltage Booster Voltage Booster Voltage Booster Voltage C2 Truck Security System Turbo Speed Vehicle Speed Clutch Switch Ccolant Temperature Sensor Cruise Control Engine Brake Preselection Engine Brake Preselection Engine Speed Sensor Engine Speed Sensor (Camshaft) Engine Speed Sensor (Crankshaft) Fuel Limiting – VGT Overspeed Fuel Pressure Monitoring CP3 Fuel Pressure Monitoring CP3 Fuel Pressure Sensor Grid Heater Main Relay Monitoring of Pressure Relief Valve Multiple State Switch Oil Pressure Sensor Oil Temperature Sensor Oil Temperature Sensor Oil Temperature Sensor Selflest Shutoff Path (After Run) Service Brake Switch CAN A CAN B BC2EDC1 msg Timeout BC3EDC2 msg Timeout EEC1 msg Timeout PTO msg Timeout DE msg Timeout			1F	All other faults (if any)		
EDC7C1	20003 20004 20005 20006 20007 20008 20009 20000 20000 20000 20000 20001 20011 20012 20011 20015 20016 20017 20018 20016 20017 20018 20018 20018 20019 20010 20010 20010 20010 20010 20010 20010 20010 20010 20020 20021 20020 20021 20022 20023 20024 20028 20027 20028 20020	Selftest Shutoff Path (Start Up) Ambient Air Pressure Sensor not used Battery Voltage Boost Air Perseure Boost Air Temperature Sensor Boost Air Temperature Sensor Boost Pressure Regulation Booster Voltage Booster Voltage Booster Voltage C2 Truck Security System Turbo Speed Vehicle Speed Clutch Switch Coolant Temperature Sensor Cruise Control Engine Brake Preselection Engine Overspeed Engine Speed Sensor (Camshaft) Engine Speed Sensor (Camshaft) Fuel Limiting – VGT Overspeed Fuel Pressure Monitoring CP3 Fuel Pressure Sensor Grid Heater Main Relay Monitoring of Pressure Relief Valve Multiple State Switch Oil Pressure Sensor Oil Temperature Sensor Oil Temperature Sensor Power Supply VGT underboost detection Selftest Shutoff Path (After Run) Service Brake Switch CAN_B BC2EDC1 msg Timeout EEC1 msg Timeout EEC1 msg Timeout PET msg Timeout PE msg Timeout			1F	All other faults (if any)		
EDC7C1	20003 20004 20005 20006 20007 20008 20009 20009 20000 20000 20000 20001 20001 20011 20012 20012 20013 20014 20015 20016 20017 20018 20018 20019 20018 20019 20019 20010 20010 20010 20010 20010 20010 20010 20010 20010 20010 20010 20010 20010 20010 20010 20021 20022 20023 20024 20028	Selftest Shutoff Path (Start Up) Ambient Air Pressure Sensor not used Battery Voltage Boost Air Perseure Boost Air Temperature Sensor Boost Air Temperature Sensor Boost Pressure Regulation Booster Voltage Booster Voltage Booster Voltage C2 Truck Security System Turbo Speed Vehicle Speed Clutch Switch Ccolant Temperature Sensor Cruise Control Engine Brake Preselection Engine Brake Preselection Engine Speed Sensor (Canshaft) Engine Speed Sensor (Crankshaft) Fuel Limiting – VGT Overspeed Fuel Pressure Monitoring CP3 Fuel Pressure Sensor Fuel Temperature Sensor Grid Heater Main Relay Monitoring of Pressure Relief Valve Multiple State Switch Oil Pressure Sensor Oil Temperature Sensor Oil Temperature Sensor Fuel Temperature Sensor Oil Temperature Sensor Oil Temperature Sensor Oil Temperature Sensor Oil Temperature Sensor Fuel Pressure Sensor Fuel Temperature Sensor Oil Temperature Sensor Oil Temperature Sensor Oil Temperature Sensor Fuel Temperature Sensor Fuel Temperature Sensor Fuel Temperature Sensor Oil Temperature Sensor Fuel Temperature Sensor Fuel Temperature Sensor Fuel Temperature Sensor Oil Temperature Sensor Fuel Temperature Sensor Fuel Temperature Sensor Oil Temperature Sensor Fuel Temperature Sensor Oil Temperature Sensor Fuel			1F	All other faults (if any)		
EDC7C1	20003 20004 20005 20006 20007 20008 20009 20000 20000 20000 20000 20001 20011 20012 20011 20013 20014 20015 20016 20017 20018 20017 20018 20018 20019 20019 20010 20010 20010 20010 20010 20010 20010 20010 20010 20010 20010 20010 20010 20010 20010 20010 20020	Selftest Shutoff Path (Start Up) Ambient Air Pressure Sensor not used Battery Voltage Boost Air Perseure Boost Air Temperature Sensor Boost Pressure Regulation Booster Voltage Booster Voltage Booster Voltage Booster Voltage C2 Truck Security System Turbo Speed Vehicle Speed Vehicle Speed Clutch Switch Coolant Temperature Sensor Cruise Control Engine Brake Preselection Engine Brake Preselection Engine Speed Sensor Engine Speed Sensor (Cranshaft) Fuel Limiting – VGT Overspeed Fuel Pressure Monitoring CP3 Fuel Pressure Sensor Fuel Temperature Sensor Grid Heater Main Relay Monitoring of Pressure Relief Valve Multiple State Switch Oil Pressure Sensor Oil Temperature Sensor Oil Temperature Sensor Oil Temperature Sensor Oil Temperature Sensor Selftest Shutoff Path (After Run) Service Brake Switch CAN A CAN B BC2EDC1 msg Timeout BC2EDC2 msg Timeout EBC1 msg Timeout PT omsg Timeout PT omsg Timeout DE msg Timeout DE msg Timeout TE msg Timeout DE msg Timeout DR msg Timeout			1F	All other faults (if any)		
EDC7C1	20003 20004 20005 20006 20007 20008 20009 20000 20000 20000 20000 20001 20001 20011	Selftest Shutoff Path (Start Up) Ambient Air Pressure Sensor not used Battery Voltage Boost Air Perseure Boost Air Temperature Sensor Boost Pressure Regulation Booster Voltage Booster Voltage Booster Voltage Booster Voltage C2 Truck Security System Turbo Speed Vehicle Speed Clutch Switch Coolant Temperature Sensor Cruise Control Engine Brake Preselection Engine Brake Preselection Engine Speed Sensor Engine Speed Sensor (Crankshaft) Fuel Limiting – VGT Overspeed Fuel Pressure Monitoring CP3 Fuel Pressure Sensor Fuel Temperature Sensor Grid Heater Main Relay Monitoring of Pressure Relief Valve Multiple State Switch Oil Pressure Sensor Oil Temperature Sensor Oil Temperature Sensor Power Supply VGT underboost detection Selftest Shutoff Path (After Run) Service Brake Switch CAN A CAN B BC2EDC1 msg Timeout BC2EDC2 msg Timeout ETC1 msg Timeout PTC msg Timeout PTC msg Timeout TE msg Timeout TE msg Timeout TE msg Timeout UNE Msi msg Timeout			1F	All other faults (if any)		
EDC7C1	20003 20004 20005 20006 20007 20008 20008 20009 20000 20000 20000 20001 20011 20011 20011 20011 20012 20014 20015 20016 20016 20017 20018 20018 20019 20010	Selftest Shutoff Path (Start Up) Ambient Air Pressure Sensor not used Battery Voltage Boost Air Perseure Boost Air Temperature Sensor Boost Pressure Regulation Booster Voltage Booster Voltage Booster Voltage Booster Voltage C2 Truck Security System Turbo Speed Vehicle Speed Clutch Switch Ccolant Temperature Sensor Cruise Control Engine Brake Preselection Engine Brake Preselection Engine Speed Sensor Engine Speed Sensor (Camshaft) Engine Speed Sensor (Crankshaft) Fuel Limiting – VGT Overspeed Fuel Pressure Monitoring CP3 Fuel Pressure Sensor Fuel Temperature Sensor Grid Heater Main Relay Monitoring of Pressure Relief Valve Multiple State Switch Oil Pressure Sensor Oil Temperature Sensor Oil Temperature Sensor Serice Brake Switch CAN A CAN B BC2EDC1 msg Timeout BC2EDC2 msg Timeout BC2EDC2 msg Timeout CCVSV msg Timeout DE msg Timeout PE msg Timeout VR msg Timeout			1F	All other faults (if any)		
EDC7C1	20003 20004 20005 20006 20007 20008 20009 20000 20000 20000 20000 20000 20001 20001 20011 20012 20012 20013 20014 20015 20016 20016 20016 20016 20016 20017 20018 20028 20028 20029 20028 20028 20028 20028 20028 20028 20028 20028 20028 20028 20028 20028 20028 20028 20028 20028 20028 20028 20031 20031 20031 20034 20035 20038 20038 20038 20038 20038 20038	Selftest Shutoff Path (Start Up) Ambient Air Pressure Sensor not used Battery Voltage Boost Air Perseure Boost Air Temperature Sensor Boost Air Temperature Sensor Boost Pressure Regulation Booster Voltage Booster Voltage Booster Voltage Booster Voltage C2 Truck Security System Turbo Speed Vehicle Speed Clutch Switch Coolant Temperature Sensor Cruise Control Engine Brake Preselection Engine Brake Preselection Engine Brake Preselection Engine Speed Sensor (Camshaft) Engine Speed Sensor (Crankshaft) Fuel Limiting – VGT Overspeed Fuel Pressure Monitoring CP3 Fuel Pressure Sensor Fuel Temperature Sensor Grid Heater Main Relay Monitoring of Pressure Relief Valve Multiple State Switch Oil Pressure Sensor Oil Temperature Sensor Oil Temperature Sensor Oil Temperature Sensor Oil Temperature Sensor Power Supply VGT underboost detection Selftest Shutoff Path (After Run) Service Brake Switch CAN A CAN B BC2EDC1 msg Timeout BC2EDC2 msg Timeout PCVSV msg Timeout PTO msg Timeout PE msg Timeout VF msg Timeout			1F	All other faults (if any)		
EDC7C1	20003 20004 20005 20006 20007 20008 20009 20000 20000 20001 20001 20011 20012 20012 20013 20014 20015 20016 20017 20018 20017 20018 20018 20019 20019 20010 20010 20010 20010 20010 20010 20010 20010 20010 20010 20010 20010 20010 20010 20010 20010 20010 20020 20021 20020 20021 20020 20021 20020 20021 20020 20021 20020 20021 20020 20021 20020 20020 20021 20020 20021 20020 20030 20031 20033	Selftest Shutoff Path (Start Up) Ambient Air Pressure Sensor not used Battery Voltage Boost Air Perseure Boost Air Temperature Sensor Boost Air Temperature Sensor Boost Pressure Regulation Booster Voltage Booster Voltage Booster Voltage C2 Truck Security System Turbo Speed Vehicle Speed Clutch Switch Coolant Temperature Sensor Cruise Control Engine Brake Preselection Engine Brake Preselection Engine Speed Sensor Engine Speed Sensor (Cranshaft) Fuel Limiting – VGT Overspeed Fuel Pressure Monitoring CP3 Fuel Pressure Sensor Fuel Temperature Sensor Grid Heater Main Relay Monitoring of Pressure Relief Valve Multiple State Switch Oil Pressure Sensor Oil Temperature Sensor Oil Temperature Sensor Oil Temperature Sensor Power Supply VGT underboost detection Selftest Shutoff Path (After Run) Service Brake Switch CAN A CAN B BC2EDC1 msg Timeout BC2EDC2 msg Timeout EBC1 msg Timeout FT on sg Timeout FT on sg Timeout FT on sg Timeout TE msg Timeout TE msg Timeout TE msg Timeout TR msg Timeout VR msg Timeout			1F	All other faults (if any)		
EDC7C1	20003 20004 20005 20006 20007 20008 20009 20008 20009 20000 20001 20010 20010 20010 20020 20030 20031 20031 20033	Selflest Shutoff Path (Start Up) Ambient Air Pressure Sensor not used Battery Voltage Boost Air Temperature Sensor Boost Air Temperature Sensor Boost Air Temperature Sensor Boost Pressure Regulation Booster Voltage Booster Voltage Booster Voltage C2 Truck Security System Turbo Speed Vehicle Speed Clutch Switch Ccolant Temperature Sensor Cruise Control Engine Brake Preselection Engine Brake Preselection Engine Brake Preselection Engine Speed Sensor Engine Speed Sensor (Camshaft) Engine Speed Sensor (Crankshaft) Fuel Limiting – VGT Overspeed Fuel Pressure Monitoring CP3 Fuel Pressure Monitoring CP3 Fuel Pressure Sensor Grid Heater Main Relay Monitoring of Pressure Relief Valve Multiple State Switch Oil Pressure Sensor Oil Temperature Sensor Oil Temperature Sensor Dil Temperature Sensor Selflest Shutoff Path (After Run) Service Brake Switch CAN A CAN_B BC2EDC1 msg Timeout BC2EDC2 msg Timeout BC3EBC3 msg Timeout PTO msg Timeout PTO msg Timeout PTO msg Timeout PE msg Timeout PE msg Timeout VE msg Timeout VR msg Timeout			1F	All other faults (if any)		
EDC7C1	20003 20004 20005 20006 20007 20008 20008 20009 20008 20009 20000 20001 20011 20011 20011 20011 20013 20014 20015 20016 20017 20018 20016 20017 20018 20018 20019 20010 20010 20010 20010 20010 20010 20010 20010 20010 20010 20010 20020 20031 20031 20033	Selflest Shutoff Path (Start Up) Ambient Air Pressure Sensor not used Battery Voltage Boost Air Perseure Boost Air Temperature Sensor Boost Pressure Regulation Booster Voltage Booster Voltage Booster Voltage Booster Voltage Booster Voltage C2 Truck Security System Turbo Speed Vehicle Speed Clutch Switch Coolant Temperature Sensor Cruise Control Engine Brake Preselection Engine Brake Preselection Engine Brake Preselection Engine Speed Sensor Engine Speed Sensor (Camshaft) Engine Speed Sensor (Camshaft) Fuel Limiting – VGT Overspeed Fuel Pressure Monitoring CP3 Fuel Pressure Monitoring CP3 Fuel Pressure Sensor Grid Heater Main Relay Monitoring of Pressure Relief Valve Multiple State Switch Oil Pressure Sensor Oil Temperature Sensor Oil Temperature Sensor Oil Temperature Sensor Power Supply VGT underboost detection Selflest Shutoff Path (After Run) Service Brake Switch CAN A CAN B BC2EDC1 msg Timeout BC2EDC2 msg Timeout BC3EDC2 msg Timeout EBC1 msg Timeout PTO msg Timeout DE msg Timeout PTO msg Timeout DE msg Timeout DE msg Timeout VR msg Timeout			1F	All other faults (if any)		
EDC7C1	20003 20004 20005 20006 20007 20008 20009 20000 20000 20000 20000 20001 20001 20011 20012 20012 20013 20014 20015 20016 20016 20016 20016 20016 20017 20018 20028 20020 20021 20021 20021 20028 20028 20028 20028 20028 20028 20028 20028 20028 20028 20028 20028 20028 20039 20030 20030 20030 20031 20041 20044 20044	Selftest Shutoff Path (Start Up) Ambient Air Pressure Sensor not used Battery Voltage Boost Air Perseure Boost Air Temperature Sensor Boost Air Temperature Sensor Boost Pressure Regulation Booster Voltage Booster Voltage Booster Voltage Booster Voltage C2 Truck Security System Turbo Speed Vehicle Speed Clutch Switch Ccolant Temperature Sensor Cruise Control Engine Brake Preselection Engine Brake Preselection Engine Speed Sensor (Camshaft) Engine Speed Sensor (Camshaft) Fuel Limiting – VGT Overspeed Fuel Pressure Monitoring CP3 Fuel Pressure Sensor Fuel Temperature Sensor Grid Heater Main Relay Monitoring of Pressure Relief Valve Multiple State Switch Oil Pressure Sensor Oil Temperature Sensor Oil Temperature Sensor Oil Temperature Sensor Oil Temperature Sensor Power Supply VGT underboost detection Selftest Shutoff Path (After Run) Service Brake Switch CAN_B BC2EDC2 msg Timeout BC2EDC2 msg Timeout ECVSV msg Timeout EEC1 msg Timeout EEC1 msg Timeout PE msg Timeout TCO msg Timeout PE msg Timeout VE msg Timeout FE msg Timeout VE msg Timeout			1F	All other faults (if any)		
EDC7C1	20003 20004 20005 20006 20007 20008 20009 20000 20000 20000 20001 20001 20011 20012 20013 20014 20015 20016 20017 20018 20018 20019 20010	Selftest Shutoff Path (Start Up) Ambient Air Pressure Sensor not used Battery Voltage Boost Air Perseure Boost Air Temperature Sensor Boost Air Temperature Sensor Boost Pressure Regulation Booster Voltage Booster Voltage Booster Voltage Booster Voltage C2 Truck Security System Turbo Speed Vehicle Speed Clutch Switch Ccolant Temperature Sensor Cruise Control Engine Brake Preselection Engine Brake Preselection Engine Speed Sensor (Cranshaft) Engine Speed Sensor (Cranshaft) Fuel Limiting – VGT Overspeed Fuel Pressure Monitoring CP3 Fuel Pressure Sensor Fuel Temperature Sensor Grid Heater Main Relay Monitoring of Pressure Relief Valve Multiple State Switch Oil Pressure Sensor Oil Temperature Sensor Oil Temperature Sensor Power Supply VGT underboost detection Selftest Shutoff Path (After Run) Service Brake Switch CAN_A CAN_B BC2EDC1 msg Timeout BC2EDC2 msg Timeout EBC1 msg Timeout PTO msg Timeout PTO msg Timeout PTO msg Timeout PTE msg Timeout PTE msg Timeout PTE msg Timeout VE msg Time			1F	All other faults (if any)		
EDC7C1	20003 20004 20005 20006 20007 20008 20009 20008 20009 20000 20001 20001 20011 20012 20012 20013 20014 20015 20016 20017 20018 20017 20018 20018 20019 20010	Selftest Shutoff Path (Start Up) Ambient Air Pressure Sensor not used Battery Voltage Boost Air Perseure Boost Air Temperature Sensor Boost Pressure Regulation Booster Voltage Booster Voltage Booster Voltage Booster Voltage C2 Truck Security System Turbo Speed Vehicle Speed Vehicle Speed Clutch Switch Coolant Temperature Sensor Cruise Control Engine Brake Preselection Engine Brake Preselection Engine Speed Sensor Craine Speed Sensor (Camshaft) Engine Speed Sensor (Crankshaft) Fuel Limiting – VGT Overspeed Fuel Pressure Monitoring CP3 Fuel Pressure Sensor Fuel Temperature Sensor Grid Heater Main Relay Monitoring of Pressure Relief Valve Multiple State Switch Oil Pressure Sensor Oil Temperature Sensor Oil Temperature Sensor Oil Temperature Sensor Oil Temperature Sensor Dil Temperature Sensor Dil Temperature Sensor Fower Supply VGT underboost detection Selftest Shutoff Path (After Run) Service Brake Switch CAN_A B BC2EDC1 msg Timeout BC2EDC2 msg Timeout BC2EDC2 msg Timeout EBC1 msg Timeout EBC1 msg Timeout PTO msg Timeout DE msg Timeout TE msg Timeout TE msg Timeout VE msg Timeout VR msg			1F	All other faults (if any)		
EDC7C1	20003 20004 20005 20006 20007 20008 20009 20000 20000 20000 20000 20001 20001 20011 20012 20012 20013 20014 20015 20016 20016 20017 20018 20018 20018 20018 20018 20019 20018 20019 20019 20010 20010 20010 20010 20010 20010 20010 20010 20010 20010 20010 20020 20021 20020 20030	Selftest Shutoff Path (Start Up) Ambient Air Pressure Sensor not used Battery Voltage Boost Air Perseure Boost Air Temperature Sensor Boost Air Temperature Sensor Boost Pressure Regulation Booster Voltage Booster Voltage Booster Voltage Booster Voltage C2 Truck Security System Turbo Speed Vehicle Speed Clutch Switch Ccolant Temperature Sensor Cruise Control Engine Brake Preselection Engine Brake Preselection Engine Speed Sensor (Camshaft) Engine Speed Sensor (Camshaft) Fuel Limiting – VGT Overspeed Fuel Pressure Monitoring CP3 Fuel Pressure Sensor Fuel Temperature Sensor Grid Heater Main Relay Monitoring of Pressure Relief Valve Multiple State Switch Oil Pressures Sensor Oil Temperature Sensor Oil Temperature Sensor Oil Temperature Sensor Oil Temperature Sensor Power Supply VGT underboost detection Selftest Shutoff Path (After Run) Service Brake Switch CAN_B BC2EDC2 msg Timeout BC2EDC2 msg Timeout EEC1 msg Timeout EEC1 msg Timeout PE msg Timeout TCO msg Timeout PE msg Timeout PE msg Timeout PE msg Timeout VE msg Timeout PE msg Timeout PE msg Timeout PE msg Timeout VE msg Timeout PE msg Timeout PE msg Timeout PE msg Timeout PE msg Timeout VE msg Timeout PE msg Timeout PE msg Timeout VE msg Timeout VE msg Timeout VE msg Timeout VE msg Timeout PE msg Timeout			1F	All other faults (if any)		
EDC7C1	20003 20004 20005 20006 20007 20008 20009 20008 20009 20000 20001 20011 20011 20011 20011 20013 20014 20014 20015 20016 20017 20018 20016 20017 20018 20018 20019 20010 20010 20010 20010 20010 20010 20010 20010 20010 20010 20010 20010 20010 20010 20020 20031 20031 20031 20031 20031 20031 20034 20040 20040 20040 20040 20041 20042 20041	Selflest Shutoff Path (Start Up) Ambient Air Pressure Sensor not used Battery Voltage Boost Air Temperature Sensor Boost Air Temperature Sensor Boost Pressure Regulation Booster Voltage Booster Voltage Booster Voltage Booster Voltage C2 Truck Security System Turbo Speed Vehicle Speed Clutch Switch Ccoolant Temperature Sensor Cruise Control Engine Brake Preselection Engine Brake Preselection Engine Speed Sensor Engine Speed Sensor (Camshaft) Engine Speed Sensor (Crankshaft) Fuel Limiting – VGT Overspeed Fuel Pressure Monitoring CP3 Fuel Pressure Sensor Grid Heater Main Relay Monitoring of Pressure Relief Valve Multiple State Switch Oil Pressure Sensor Oil Temperature Sensor Oil Temperature Sensor Oil Temperature Sensor Serliets Shutoff Path (After Run) Service Brake Switch CAN A CAN_B BC2EDC1 msg Timeout BC2EDC2 msg Timeout BC2EDC2 msg Timeout BC3EDC2 msg Timeout PTO msg Timeout PE msg Timeout PTO			1F	All other faults (if any)		
EDC7C1	20003 20004 20005 20006 20007 20008 20009 20008 20009 20000 20001 20001 20011 20012 20012 20013 20014 20015 20016 20017 20016 20017 20018 20018 20018 20019 20018 20019 20019 20010 20010 20010 20010 20010 20010 20010 20010 20010 20010 20010 20010 20010 20020	Selftest Shutoff Path (Start Up) Ambient Air Pressure Sensor not used Battery Voltage Boost Air Perseure Boost Air Temperature Sensor Boost Air Temperature Sensor Boost Pressure Regulation Booster Voltage Booster Voltage Booster Voltage Booster Voltage C2 Truck Security System Turbo Speed Vehicle Speed Clutch Switch Ccolant Temperature Sensor Cruise Control Engine Brake Preselection Engine Brake Preselection Engine Speed Sensor (Cranshaft) Engine Speed Sensor (Cranshaft) Fuel Limiting – VGT Overspeed Fuel Pressure Monitoring CP3 Fuel Pressure Sensor Fuel Temperature Sensor Grid Heater Main Relay Monitoring of Pressure Relief Valve Multiple State Switch Oil Pressure Sensor Oil Temperature Sensor Oil Temperature Sensor Power Supply VGT underboost detection Selftest Shutoff Path (After Run) Service Brake Switch CAN A CAN B BC2EDC1 msg Timeout BC2EDC2 msg Timeout ECVSV msg Timeout ETC1 msg Timeout ETC1 msg Timeout PTC msg Timeout TCO1 msg Timeout TCO1 msg Timeout TCO1 msg Timeout TR msg Timeout TR msg Timeout TR msg Timeout VE msg Timeout V			1F	All other faults (if any)		

ECU	SPN	Fault Component	Description	FMI	FMI	FMI	Lamp	Comment
Name EDC7C1	[Hex] 20052	Lowside Powerstage 6	Description		[HEX]	Description	status	Comment
EDC7C1 EDC7C1	20053 20054	Small Signal Powerstage 1 Small Signal Powerstage 2						
EDC7C1 EDC7C1	20055 20056	Small Signal Powerstage 3 Small Signal Powerstage 4						
EDC7C1 EDC7C1 EDC7C1	20057 20058 20059	Solenoid Powerstage 1 Solenoid Powerstage 2 Solenoid Powerstage 3						
EDC7C1 EDC7C1	2005A 2005B	Solenoid Powerstage 3 Solenoid Powerstage 4 Solenoid Powerstage 5						
EDC7C1 EDC7UC31	2005C 10011	Solenoid Powerstage 6 Vehicle Speed failure	VSSCD1	02	02	Signal not valid	Yellow	
				03 04	03	Value above Limit Distance factor not learned		
EDC7UC31	10012	Accelerator Pedal 1 failure	APP1	12 03	03	Signal not plausible Signal too high	Yellow	
				04 12	0C	Signal too low Signal not plausible to the reference signal		
EDC7UC31	10014	Multiple State Switch failure	MSSCD	03 04	04	Short to Battery Short to Ground	Yellow	
EDC7UC31	10016	Main Clutch Signal failure	ConvCD	12 02 12	02	Signal not plausible Info: Clutch signal failure via CAN Signal not plausible		
EDC7UC31	10017	Brake Signal failure	BrkCD	02 12	02	Signal failure Signal failure Signal not plausible	Yellow	
EDC7UC31 EDC7UC31	10019 1001F	Terminal 15 failure SCR Temperatures plausibility	T15CD SCRCatPlausiv	2 02	02	No Signal 02: Ambient Temperature of Humidity Sensor or both Catalyst	MIL	Power Reduction (OBD)
				03 04	03 04	Temperatures not plausible 03: Temperature after Catalyst not plausible		Long Term Failure
				12	0C	04: Temperature before Catalyst not plausible 0C: Temperature Deviation between up- and downstream Catalyst		
EDC7UC31	10025		MRIyCD	03		Temperature too high during Operation Short to Battery		
EDC7UC31	10026	VGT, Lambda Heater, EGR Bypass Valve, EGR Actuator, Blow By Valve) Battery Voltage failure	BattCD	04		Short to Ground Signal too high	Yellow	
EDC7UC31	10027	Engine Brake decompression Valve failure	CRERCD	04	04	Signal too low Open Load	Red	Long Term Failure
				03 04	03	Short to Battery Short to Ground		Lamp status = Yellow on E5, Red ob EE E3
EDC7UC31	10028	Main Relay 1 (Engine Brake Decompression Valve) Short to Battery		3		Short to Battery	Yellow	Long Term Failure
EDC7UC31	10029	Main Relay 3 failure (A/C Compressor, Fuel Filter Heater, Intercooler Bypass Valve,	MRIyCDMnRiy3	03 04		Short to Battery Short to Ground		
		Additive Valve, Grid Heater 2, Fan 2, OBD/Cold Start/ Adjustable Speed Limiter						
EDC7UC31	1002B	Lamp) Air Heater 1 Power Stage failure	ArHt1	02 03		Open Load Short to Battery	Yellow	
EDC7UC31	1002E	Air Heater always on	AirHtStickOnlv	03	04	Short to Ground Multi Signal failure	Yellow	
EDC7UC31	10031	Coolant Temperature Sensor failure	CTSCD	02 03	02 03	CAN Signal failure Signal too high	Yellow	
				04 12	04 0C	Signal too low Signal not plausible to Oil Temperature		
EDC7UC31 EDC7UC31	10032 10033	Coolant Temperature Dynamic failure Boost Air Temperature Sensor failure	Clg_DynTst IATSCD	12 02	02	Minimum Temperature Rise not reached CAN Signal failure		Long Term Failure
ED0711004	40004	Don't Don't Don't de la lace	ppeop	03 04	04	Signal too high Signal too low	V-II	Down Deduction (Tarkeisel)
EDC7UC31	10034	Boost Pressure Sensor failure	BPSCD	02 03 04	03	CAN Signal failure Signal too high Signal too low	Yellow	Power Reduction (Technical) Long Term Failure
EDC7UC31	10035	Fuel Temperature Sensor failure	FTSCD	12	0C	Signal not plausible Signal too high	Yellow	Long Term Failure
EDC7UC31		Oil Pressure Sensor failure	OPSCD	04	04	Signal too low Hardware failure	Yellow	
				03 04	04	Signal too high Signal too low		
EDC7UC31	1003A	Oil Temperature Sensor failure	OTSCD	12 02	02	Value too high CAN Signal failure	Yellow	
				03 04	04	Signal too high Signal too low		
EDC7UC31	1003C	Ambient Air Temperature Sensor failure (of Humidity Sensor)	EATSCD	12 02 03	02	Signal not plausible with Coolant Temperature CAN Signal failure Signal too high		Long Term Failure
EDC7UC31	10041	Crankshaft Speed Signal failure	EngMCrS1	04	04	Signal too low No Signal	Yellow +	Power Reduction (Technical)
EDC7UC31	10042	Engine runs with Camshaft Speed only	EngMBackUp	04	04	Signal wrong Backup Mode	MIL	Long Term Failure Power Reduction (Technical)
EDC7UC31	10043	Camshaft Speed Signal failure	EngMCaS1	02 04	04	No Signal Signal wrong		Power Reduction (Technical)
EDC7UC31	10044	Offset between Camshaft and Crankshaft	EngMOfsCaSCrS	3		Offset between Signals	MIL	Long Term Failure
EDC7UC31	10045	Fan Actuator 1 failure	FanCD	02 03 04	02 03	Open Load Short to Battery Short to Ground	Yellow	
EDC7UC31	10046	Fan Actuator 2 Power Stage failure	FanCD2	12	0C	Temperature too high Open Load	Yellow	
22070001	10040	Tan Actual 2 Tower Stage familie	. 4.1052	03 04	03	Short to Ground	1 CHOW	
EDC7UC31 EDC7UC31	1004D 1004F	Info: Engine Overspeed Protection Info: OBD Performance Limiter Intervention	EngPrtOvrSpd CoVehPrflmAct	3		Engine Overspeed Performance Limitation active	Yellow	
EDC7UC31	10051	by Legislation Cylinder 1 BIP search failure	BIPCyl1	3	03	Too many unsuccessful searches	Yellow +	Power Reduction (Technical)
EDC7UC31	10052	Cylinder 2 BIP search failure	BIPCyl2	3	03	Too many unsuccessful searches		Long Term Failure Power Reduction (Technical)
EDC7UC31	10053	Cylinder 3 BIP search failure	BIPCyl3	3	03	Too many unsuccessful searches	MIL Yellow + MIL	Long Term Failure Power Reduction (Technical) Long Term Failure
EDC7UC31	10054	Cylinder 4 BIP search failure	BIPCyl4	3	03	Too many unsuccessful searches		Long Term Failure Long Term Failure
EDC7UC31	10055	Cylinder 5 BIP search failure	BIPCyl5	3	03	Too many unsuccessful searches		Power Reduction (Technical) Long Term Failure
EDC7UC31	10056	Cylinder 6 BIP search failure	BIPCyl6	3		Too many unsuccessful searches	Yellow + MIL	Power Reduction (Technical) Long Term Failure
EDC7UC31 EDC7UC31	1005F 10061	Info: Long Term Fuel system Failure Injector Cylinder 1 failure	OBDGFClct1 InjVlvCy11A	3 02	02	Long Term Fault present Short High Side to Ground	MIL Yellow +	Long Term Failure ((not deletable until after 400 days) Long Term Failure
				03 04	04	Short Low Side to Battery Depending on Application Not classificate failure	MIL	
EDC7UC31	10062	Injector Cylinder 2 failure	InjVIvCyl2A	12 02 03	02	Not classifiable failure Short High Side to Ground Short Low Side to Battery	Yellow + MIL	Long Term Failure
				03 04 12	04	Depending on Application Not classifiable failure	WIII L	
EDC7UC31	10063	Injector Cylinder 3 failure	InjVIvCyl3A	02 03	02 03	Short High Side to Ground Short Low Side to Battery	Yellow + MIL	Long Term Failure
				04 12	04 0C	Depending on Application Not classifiable failure		
EDC7UC31	10064	Injector Cylinder 4 failure	InjVIvCyI4A	02 03	03	Short High Side to Ground Short Low Side to Battery	Yellow + MIL	Long Term Failure
FDOTUS	40000	Injector Official - 5 C "	Ish As Call A	04 12	0C	Depending on Application Not classifiable failure	V-"	Lang Tarm Feilure
EDC7UC31	10065	Injector Cylinder 5 failure	InjVIvCyI5A	02 03 04	03	Short High Side to Ground Short Low Side to Battery Depending on Application	Yellow + MIL	Long Term Failure
EDC7UC31	10066	Injector Cylinder 6 failure	InjVIvCyl6A	12	0C	Not classifiable failure Short High Side to Ground	Yellow +	Long Term Failure
22.3031	. 3000	,,		03 04	03 04	Short Low Side to Battery Depending on Application	MIL	
EDC7UC31	10067	Injector Cylinder 1 warning	InjVIvCy11B	12 02	0C 02	Not classifiable failure Open Load		Long Term Failure
				03 04	04	Fast Decay Error Depending on Application	MIL	
EDC7UC31	10068	Injector Cylinder 2 warning	InjVIvCyl2B	12 02	02	Current Level Error Open Load	Yellow +	Long Term Failure
				03 04 12	04	Fast Decay Error Depending on Application Current Level Error	MIL	
EDC7UC31	10069	Injector Cylinder 3 warning	InjVIvCyl3B	02 03	02	Current Level Error Open Load Fast Decay Error	Yellow + MIL	Long Term Failure
				04 12	04	Depending on Application Current Level Error		
EDC7UC31	1006A	Injector Cylinder 4 warning	ÎnjVlvCyl4B	02 03	02 03	Open Load Fast Decay Error	Yellow + MIL	Long Term Failure
				04 12	04 0C	Depending on Application Current Level Error		
EDC7UC31	1006B	Injector Cylinder 5 warning	InjVtvCyl5B	02 03	02 03	Open Load Fast Decay Error	Yellow + MIL	Long Term Failure
EDCZI IOCA	10000	Injector Cylinder & warning	IniVivO46R	04 12	0C	Depending on Application Current Level Error Open Load	Valla	Long Term Failure
EDC7UC31	1006C	Injector Cylinder 6 warning	InjVIvCyI6B	02 03 04	03	Open Load Fast Decay Error Depending on Application	Yellow + MIL	Long Territ Pallute
EDC7UC31	1006E	Minimum Injections Number not reached	InjVlvNumMinInj	12	0C	Current Level Error Number of Injections not reached	Red	
EDC7UC31		Injector Bank 1 failure	InjVIvBnk1A	02 03	02 03	Depending on Application Short circuit		Long Term Failure
				04 12	04	Short Low Side to Ground Not classifiable failure		

ECU Name	SPN [Hex]	Fault Component	Description		FMI [HEX]		Lamp status	Comment
EDC7UC31	10073	Injector Bank 2 failure	InjVIvBnk2A	02 03	03	Depending on Application Short circuit	Yellow + MIL	Long Term Failure
EDC7UC31	1007C	ECU Hardware for Injection: CY33X Chip	InjVIvChipA	04 12 02	0C	Short Low Side to Ground Not classifiable failure Test Mode	Vallow	
EDC/0C31	10070	specific failure (1)	Injvivenipa	02 03 04	03	I lest Mode Internal reset - Clock Loss - Voltage too low Unlocked - Init fail	Yellow	
EDC7UC31	1007F	Failure in Injection Quantity Adjustment	lnjVlvQntAdj	12	0C		Yellow	
EDC7UC31	10081	(NIMA Programming) Differential Pressure Sensor Failure between		12 03	0C 03	Invalid EEPROM Adjustment Value Checksum Signal too high	Yellow +	
EDC7UC31	10091	Exhaust and Intake (EGR Valve) Boost Pressure Actuator Current failure	BPACD_ADC	04 02	02	Signal too low Signal not plausible	MIL Yellow	
ED0711004	10000		221.02	03 04	04	Signal too high Signal too low	V !!	
EDC7UC31 EDC7UC31	10092 10093	Boost Pressure Actuator Short to Battery Turbine Speed Sensor failure	BPACD_Max TSSCD	3 02 03	02	Short to Battery Signal not valid Signal too high	Yellow	Long Term Failure
				03 04 12		Signal too ligh Signal too low Signal not plausible		
EDC7UC31 EDC7UC31	10098 10099	Turbocharger Control failure Turbocharger Control Overboost Pressure	PCRMulSigDfctlv PCRP2lv	3 02	03	Multi Signal failure Pressure deviation too high	Yellow Yellow	Power Reduction (Technical)
EDC7UC31	1009A	failure Turbocharger Control Turbo Speed failure	PCRTrblv	03 02	03 02	Pressure too high Irreversible Overspeed	Yellow	Long Term Failure Power Reduction (Technical)
EDC7UC31	1009B	Turbine Overspeed at Normal Atmospheric	TrbChlv	03 3		Reversible Overspeed Irreversible turbine overspeed	Yellow	
EDC7UC31	1009E	Pressure Torque Reduction due to Smoke Limitation	SmkTrqLim	4	04	Torque Limitation		
EDC7UC31	1009F	NOx Estimation failure NOx Sensor Plausiblity failure	NOXEstiv Fronting NOVE and NOVE	3		Estimated Nox signal not reliable Signal not plausible	MIL	Power Reduction (OBD)
EDC7UC31	100A2 100A3	NOx Sensor Failure	FrmMngNOxSensNOxIv FrmMngNOxSensIv	12	0C 03	Open Load		Long Term Failure Power Reduction (OBD)
				04 12	04	Short Circuit Sensor not ready in time		Long Term Failure
EDC7UC31	100A4	CAN Message timeout Nox (from Nox Sensor)	FrmMngTONOxSenslv	02 04		No Signal Signal wrong	MIL	Power Reduction (OBD) Long Term Failure
EDC7UC31	100A5	CAN Message timeout DM1DCU (from DCU)	FrmMngTODM1DCUIv	02 04	04	No Signal Signal wrong	MIL	Power Reduction (OBD) Long Term Failure
EDC7UC31	100A6	CAN Message timeout SCR1 (from DCU)	FrmMngTOSCR1Iv	02 04	04	No Signal Signal wrong	Yellow + MIL	Power Reduction (OBD) Long Term Failure
EDC7UC31	100A8	Info: SCR Dosing Valve Overheat Protection		03 04	04	Torque Limitation Level2 for SCR Protection active Torque Limitation Level1 for SCR Protection active	Yellow	Long Torm Failure
EDC7UC31	100AE 100AF	Humidity Sensor Signal Ratio failure Info: DCU Error1 via CAN message	IAHSCDStrtDly FrmMngDM1SPN1Iv	03 04 3	04	Signal Ratio above Limit Signal Ratio below Limit Error in DCU active		Long Term Failure Power Reduction (OBD)
EDC7UC31	100AF 100B1	DM1DCU CAN A Bus off	PrmmngDM1SPN1IV NetMngCANAOff	3		CAN Bus off		י נשט ווייטטטוטוו (טשט)
EDC7UC31 EDC7UC31	100B1 100B2 100B3	CAN A Bus off CAN B Bus off CAN C Bus off	NetMngCANCOff NetMngCANCOff	3	03	CAN Bus off CAN Bus off		
EDC7UC31	100B4	CAN Message timeout BC2EDC1 (from Body Computer)	FrmMngTOBC2EDC1Iv	02 04	02 04	No Signal Signal wrong	Yellow	
EDC7UC31	100B5	CAN Message timeout VM2EDC (from VCM)		02 04	02 04	No Signal Signal wrong	Yellow	
EDC7UC31 EDC7UC31	100B7 100B9	CAN Transmit Message timeout Info: MIL visualization not available	FrmMngTxTO FrmMngBC1MlLiv	3		CAN timeout MIL visualization not available	Yellow +	Power Reduction (OBD)
EDC7UC31	100BA	CAN Message timeout Dash Display (from	FrmMngTODashDspllv	02		No Signal	MIL	
EDC7UC31	100BC	VCM) CAN Message timeout AMCON (from VCM)	FrmMngTORxAMCONIv	04 02 04	02	Signal wrong No Signal Signal wrong		
EDC7UC31	100BD	CAN Message timeout CCVS (from Body Computer or VCM)	FrmMngTORxCCVS	2		CAN timeout		
EDC7UC31	100C2	CAN Message timeout ETC1 (from Electronic Transmission Controller)	FrmMngTOETC1	2	02	CAN timeout	Yellow	
EDC7UC31	100C3	CAN Message timeout TCO1 (from Tachograph Output)	FrmMngTOTCO1	2	02	CAN timeout		
EDC7UC31	100C6	CAN Message timeout active TSC1-PE (Torque/Speed Control Request from PTO to	FrmMngTOTSC1PEActlv	3	03	CAN timeout	Yellow	
EDC7UC31	100C8	Engine) CAN Message timeout active TSC1-VE	FrmMngTOTSC1VEActIv	3	03	CAN timeout	Yellow	
		(Torque/Speed Control Request from VCM/BC to Engine)						
EDC7UC31	100D1 100D2	ECU Hardware: SPI Communication failure ECU Hardware: EEPROM failure	HWEMONCOM HWEMONEEPROM	3 02		CJ940 Communication failure Write failure	Red	
EDC/OC31	10002	ECO Halowale. EEPROM lallule	INVENORIEEPROM	04 12	04	Read failure Default Value used		
EDC7UC31 EDC7UC31	100D3 100D4	ECU recovery - locked ECU Hardware: Microcontroller Watchdog fa	HWEMonRcyLocked	12	0C	Recovery occurred Watchdog and Controller not plausible	Red Yellow	
EDC7UC31	100D5			02 04	02	Supply Voltage too high Watchdog		Power Reduction (Technical)
EDC7UC31	100D6	ECU Hardware: TPU Monitoring	TPUMon	12 12		Supply Voltage too low	Yellow	
EDC7UC31	100D7	ECU Software: Variant Dataset failure	VarMngCodDs	02 12	0C	Variant Dataset not valid Variant could not be set	Red	
EDC7UC31 EDC7UC31	100D8 100D9	ECU Hardware: Controller Watchdog failure ADC Monitoring failure	WdCom ADCMon	12 02	02	SPI Communication failure Test Impulse Error	Yellow Yellow	
				03 04	04	Reference Voltage too high Reference Voltage too low		
EDC7UC31 EDC7UC31	100E2 100E3	Immobilizer failure (no fuel release) Overrun Monitoring failure	ImmCtl OvRMon	12 4 3	04	Queue Error Injection disabled Injection Time too long	Red Red	
EDC7UC31	100E3	Redundant Engine Speed in Overrun Monitoring	OvRMonSigA	3		Speed Signal not plausible	Red	
EDC7UC31	100E5	ECU Hardware: Sensor 12V Supply Voltage failure	SSpMon12V	03 04		Signal too high Signal too low	Yellow	
EDC7UC31	100E6	ECU Hardware: Sensor Supply Voltage 1 failure	SSpMon1	03 04	03	Signal too high Signal too low	Yellow + MIL	Power Reduction (Technical) Long Term Failure
EDC7UC31	100E7	ECU Hardware: Sensor Supply Voltage 2 failure	SSpMon2	03 04	04	Signal too high Signal too low	Yellow	
EDC7UC31	100E8	ECU Hardware: Sensor Supply Voltage 3 failure	SSpMon3	03 04	04	Signal too high Signal too low		Power Reduction (Technical)
EDC7UC31 EDC7UC31	100E9 100EA	ECU internal Supply Voltage too high ECU internal Supply Voltage too low	HWEMonUMaxSupply HWEMonUMinSupply	3 4	04	Supply Voltage CJ940 above Limit Supply Voltage CJ940 below Limit	Red Red	
EDC7UC31	100EB	Atmospheric Pressure Sensor failure	APSCD	02 03 04		CAN Signal failure Signal too high Signal too low		
EDC7UC31	20011	Vehicle Speed Sensor failure	VSSCD2	12 02	0C	Signal not plausible to Reference Pressure (Boost or Exhaust) CAN Signal failure		
250,0001	_5511	Spood consor failure		03 04	03	Voltage too low		
EDC7UC31	20015	Cruise Control Buttons irreversible failure	MFLv_Irvrs	12 12	0C	Voltage not plausible Invalid Signal Combination	L	
EDC7UC31	2001D	SCR Catalyst Thermal Ageing Limit exceeded	SCRCatAgeingly	3	03	Too High Catalyst Temperature for excessive		Long Term Failure
EDC7UC31	2001E	SCR Catalyst Efficiency below first threshold		3		Nox above first OBD threshold (MIL On)	MIL	Long Term Failure
EDC7UC31	2001F	Current of Boost Pressure Actuator out of Range	BPACOCurrOutRnglv	3		Ratio of desired and measured BPA current out of range	B 471	
EDC7UC31 EDC7UC31	20025 20028	Main Relay failure (Interrupted Afterrun) Main Relay 1 (Engine Brake Decompression Valve) Short to Ground	MRIyCDAftRun MnRIy1_SCG	4		Relay opened too early (Afterrun not completed) Short to Ground	MIL Yellow	Long Term Failure
EDC7UC31 EDC7UC31	20032 20038	Valve) Short to Ground Coolant Temperature Test failure Oil Pressure too low	CigAbsTst OPSCD1			Minimum Temperature not reached in time Value too low	Yellow Yellow	
EDC7UC31 EDC7UC31	2003A 2004A	Oil Pressure too low Oil Temperature too high Engine Compartment Stop Button stuck	OFSCD1 ECBtCDStop		0C	Value too low Temperature too high Button stuck	Yellow	
EDC7UC31 EDC7UC31	2005F	Info: Long Term Injection timing Failure ECU Hardware for Injection: CY33X Chip	OBDGFCict2 InjVtvChipB	3 02	03 02	Long Term Fault present Test Mode	MIL Yellow	Long Term Failure ((not deletable until after 400 days)
		specific failure (2)		03 04	03 04	Internal reset - Clock loss - Voltage too low Unlocked - Init fail		
EDC7UC31	20092	Boost Pressure Actuator Short to Ground	BPACD_Min	12 4		SPI Communication failure Short to Ground	Yellow	Power Reduction (Technical)
EDC7UC31	20099	Turbocharger Control Underboost Pressure	PCRUndBstlv	3	03	Pressure too low	Yellow +	Long Term Failure
EDC7UC31	2009D	failure Info: Torque Limitation due to Negative	NTCTrqLim	4	04	Torque Limitation	MIL	
EDC7UC31	200A2	Torque Coordinator NOx Sensor Drift failure	SCRCatNOxDrlv	3	03	Zero Drift detected	MIL	Power Reduction (OBD) Long Term Failure
EDC7UC31	200A6	CAN Message timeout SCR2 (from DCU)	FrmMngTOSCR2lv	02 04		No Signal Signal wrong	Yellow +	Long Term Failure Power Reduction (OBD) Long Term Failure
EDC7UC31	200AE	Info: Humidity Sensor possibly saturated with water droplets	IAHSCD	03 04	03 04	Signal Ratio above Limit Signal Ratio below Limit		
EDC7UC31	200AF	Info: DCU Error2 via CAN message DM1DCU	FrmMngDM1SPN2iv	3	03	Error in DCU active		Power Reduction (OBD)
EDC7UC31	200B4	CAN Message timeout BC2EDC2 (from Body Computer)	FrmMngTOBC2EDC2Iv	02 04	04	No Signal Signal wrong	Yellow	
EDC7UC31	200C2	CAN Message timeout ETC2 (from Electronic Transmission Controller)	FrmMngTOEC2	2		CÂN timeout	V. "	
EDC7UC31	200C6	CAN Message timeout inactive TSC1-PE (Torque/Speed Control Request from PTO to Engine)	FrmMngTOTSC1PEPaslv	02 04		No Signal Signal wrong	Yellow	
EDC7UC31	200C8	CAN Message timeout active TSC1-VR (Torque/Speed Control Request from	FrmMngTOTSC1VRActiv	3	03	CAN timeout	Yellow	
	1	VCM/BC to Retarder)	FrmMngTOTimeDateIv	02	02	No Signal		
EDC7UC31	200C9	Time/Date CAN timeout (from Tachograph	I mining to time batery		UZ			
EDC7UC31	200D3	or VCM) ECU recovery - suppressed	HWEMonRcySuppressed	04 12	04 0C	Signal wrong Recovery occurred	Red	
EDC7UC31		or VCM)		04 12	04 0C 0C	Signal wrong		Power Reduction (OBD) Long Term Failure

ECU	SPN	Fault Component	Description	FMI IDEC1	FMI [HEX]	FMI Description	Lamp	Comment
Name EDC7UC31	[Hex] 3001E	SCR Catalyst Efficiency below second	SCRCatNOxLvl2lv	3		Description Nox above second OBD threshold (Performance limitation)	status MIL	Power Reduction (OBD)
EDC7UC31	3001F	threshold SCR Catalyst System Efficiency too high	SCRCatHiEfflv	3		Efficiency too high		Long Term Failure Long Term Failure
EDC7UC31 EDC7UC31	3005F 30092	Info: Long Term air system failure Boost Pressure Power Stage open load or	OBDGFClct3 BPACD SigNpl	3 02		Long Term Fault present Open Load		Long Term Failure ((not deletable until after 400 days) Long Term Failure
EDC7UC31	3009E	high Temperature Info: Torque Limitation due to Turbo Charger		12 4	0C	Temperature too high Torque Limitation		
		Protection	·			·	MII	Davis Padratica (ODD)
EDC7UC31	300A2	NOx Sensor Plausibility failure	SCRCatNOxPliv	3		Difference between measured and simulated Value not plausible		Power Reduction (OBD) Long Term Failure
EDC7UC31	300C8	CAN Message timeout inactive TSC1-VE (Torque/Speed Control Request from	FrmMngTOTSC1VEPaslv	02 04		No Signal Signal wrong	Yellow	ı
EDC7UC31	300C9	VCM/BC to Engine) CAN Message timeout HRVD (from	FrmMngTOHRVDIv	02	02	No Signal		
		Tachograph - High Resolution Vehicle Distance)	g	04		Signal wrong		ı
EDC7UC31	300D3	ECU recovery - visible	HWEMonRcyVisible	12		Recovery occurred	Red	
EDC7UC31 EDC7UC31	4005F 4009E	Info: Long Term NOx Sensor Failure Info: Torque Limitation due to Engine	OBDGFClct4 EngPrtTrqLim	3		Long Term Fault present Torque Limitation	MIL	Long Term Failure ((not deletable until after 400 days)
		Protection (against Excessive Torque, Engine Overspeed and Overheat)				·		ı
EDC7UC31	400AF	Info: DCU Error4 via CAN message DM1DCU	FrmMngDM1SPN4Iv	3	03	Error in DCU active	MIL	Power Reduction (OBD)
EDC7UC31	400C8	CAN Message timeout inactive TSC1-VR	FrmMngTOTSC1VRPasiv	02		No Signal	Yellow	
		(Torque/Speed Control Request from VCM/BC to Retarder)		04		Signal wrong		ı
EDC7UC31 EDC7UC31	5005F 5009D	Info: Long Term SCR System Failure Info: Torque Limitation due to SCR Catalyst	OBDGFClct5 SCRPrtTraLim	3		Long Term Fault present Torque Limitation	MIL	Long Term Failure ((not deletable until after 400 days)
EDC7UC31	500AF	Overheat Protection Info: DCU Error5 via CAN message	FrmMngDM1SPN5lv	3		Error in DCU active	MII	Power Reduction (OBD)
		DM1DCU					IVIIL	Fower Reduction (OBD)
EDC7UC31	6009E	Info: Torque Limitation due to Fuel Quantity Limitation because of Injection System	QLimTrqLim	4	04	Torque Limitation		ı
ETC ZF ET2	40302	Errors Short circuit to ground at output stage to Y2		5	05	Shorted to low source	Red	i
ETC ZF ET2	40303	(Valve Splitter; DD: high, OD: low) Short circuit to ground at output stage to Y3		5		Shorted to low source	Red	
ETC ZF ET2		(Valve Splitter; DD: low, OD: high)						
	40304	Short circuit to ground at output stage to Y4 (Valve Select)		5		Shorted to low source	Red	
ETC ZF ET2	40305	Short circuit to ground at output stage to Y5 (Valve Select)		5		Shorted to low source	Red	<u> </u>
ETC ZF ET2	40306	Short circuit to ground at output stage to Y6 (Valve Shift)		5	05	Shorted to low source	Red	
ETC ZF ET2	40307	Short circuit to ground at output stage to Y7		5	05	Shorted to low source	Red	- I
ETC ZF ET2	40308	(Valve Shift) Short circuit to ground at output stage to Y8		5	05	Shorted to low source	Red	
ETC ZF ET2	40309	(Valve Range) Short circuit to ground at output stage to Y9		5	05	Shorted to low source	Red	
ETC ZF ET2	4030A	(Valve Range) Short circuit to ground at output stage to Y10		5	05	Shorted to low source	Red	
ETC ZF ET2	4030B	(Main valve) Short circuit to positive at output stage to		0		No fault sympton available for this DTC		
		warning buzzer (shift lever)					Yellow	
ETC ZF ET2	4030C	Short circuit to ground at output stage to reverse light relay (shift lever)		0		No fault sympton available for this DTC	Yellow	<u> </u>
ETC ZF ET2	4030D	Short circuit to ground at output stage to PTO 1		0	00	No fault sympton available for this DTC	Red	
ETC ZF ET2	4030E	Short circuit to ground at output stage to PTO 2		0	00	No fault sympton available for this DTC	Red	- I
ETC ZF ET2	40311	Short circuit to ground at output stage to Y1		5	05	Shorted to low source	Yellow	
ETC ZF ET2	40312	(inertia brake valve) Short circuit to ground at output stage to		5	05	Shorted to low source	Yellow	
ETC ZF ET2	40313	small diseng. clutch valve Short circuit to ground at output stage to		5	05	Shorted to low source	Yellow	
ETC ZF ET2		small eng. clutch valve Short circuit to ground at output stage to		5		Shorted to low source	Yellow	
		large diseng. clutch valve						
ETC ZF ET2	40315	Short circuit to ground at output stage to large eng. clutch valve		5		Shorted to low source	Yellow	
ETC ZF ET2	40316	Short circuit to ground at output ADVP (wakeup control signal for shift lever, voltage		5	05	Shorted to low source	Red	
		supply to display, warning buzzer, output speed sensor 1)						ı
ETC ZF ET2	40319	Short circuit to ground at output SD to		0	00	No fault sympton available for this DTC	Yellow	
ETC ZF ET2	4031A	display CAN engine configuration timeout		4	04	No signal	Yellow	
ETC ZF ET2	4031B	Error on "engine configuration message" (engine configuration)		8	80	Invalid signal	Yellow	ı
ETC ZF ET2	4031C	Error on "Actual driveline retarder - percent torque" signal (ERC1_DR)		8	08	Invalid signal	Yellow	
ETC ZF ET2	4031D	Error on "Engine coolant load increase"		8	08	Invalid signal	Yellow	
ETC ZF ET2	4031E	signal (ERC1_DR) Error on "Driveline retarder configuration		8	08	Invalid signal	Yellow	
ETC ZF ET2	4031F	message" (Driveline retarder configuration) Error on "Actual engine retarder - percent		8	08	Invalid signal	Yellow	
ETC ZF ET2	40320	torque" signal (ERC1_ER) Error on "Engine retarder configuration		8	08	Invalid signal	Yellow	
ETC ZF ET2	40321	message" (Engine retarder configuration) CAN "Engine retarder configuration" timeout		4		No signal		
		-				-	Yellow	
ETC ZF ET2	40322	Interruption at output stage to Y2 (Valve Splitter)		10	0A	Disconnection	Red	
ETC ZF ET2	40323	Interruption at output stage to Y3 (Valve Splitter)		10	0A	Disconnection	Red	
ETC ZF ET2	40324	Interruption at output stage to Y4 (Valve Select)		10	0A	Disconnection	Red	
ETC ZF ET2	40325	Interruption at output stage to Y5 (Valve		10	0A	Disconnection	Red	
ETC ZF ET2	40326	Select) Interruption at output stage to Y6 (Valve		10	0A	Disconnection	Red	
ETC ZF ET2	403 27	Shift) Interruption at output stage to Y7 (Valve		10	0A	Disconnection	Red	
ETC ZF ET2	40328	Shift) Interruption at output stage to Y8(Valve		10		Disconnection	Red	
ETC ZF ET2	40329	Range) Interruption at output stage to Yo(valve		10		Disconnection	Red	
		Range)						
ETC ZF ET2	4032A	Interruption at output stage to Y10 (Main valve)		10		Disconnection	Red	
ETC ZF ET2 ETC ZF ET2	4032B 4032C	Interruption at output to warning buzzer Interruption at output stage to reverse light		0		No fault sympton available for this DTC No fault sympton available for this DTC	Yellow Yellow	
ETC ZF ET2	4032D	relay Interruption at output stage to PTO 1		0		No fault sympton available for this DTC	Yellow	
ETC ZF ET2 ETC ZF ET2	4032E 40331	Interruption at output stage to PTO 2 Interruption at output stage to PTO 2		0	00	No fault sympton available for this DTC Disconnection	Yellow Yellow	
		brake valve)						
ETC ZF ET2	40332	Interruption at output stage to small disengagement clutch valve		10		Disconnection	Yellow	
ETC ZF ET2	40333	Interruption at output stage to small engagement clutch valve		10		Disconnection	Yellow	
ETC ZF ET2	40334	Interruption at output stage to large disengagement clutch valve		10	0A	Disconnection	Yellow	
ETC ZF ET2	40335	Interruption at output stage to large		10	0A	Disconnection	Yellow	
ETC ZF ET2	40336	Interruption at output ADVP		10		Disconnection	Red	
ETC ZF ET2 ETC ZF ET2	4033B 4033C	Acknowledge fault of PTO 1 Acknowledge fault of PTO 2		8	08	Invalid signal Invalid signal	Yellow Yellow	
ETC ZF ET2 ETC ZF ET2		Disengagement fault of PTO 1 Disengagement fault of PTO 2		8	80	Invalid signal Invalid signal	Red Red	
ETC ZF ET2 ETC ZF ET2	4033F 40340	Engagement fault of PTO1 Engagement fault of PTO2		8	80	Invalid signal Invalid signal	Yellow Yellow	
ETC ZF ET2	40340	Short circuit to positive at output stage to Y2		6		Shorted to high source	Red	
ETC ZF ET2	40343	(Valve Splitter) Short circuit to positive at output stage to Y3		6	06	Shorted to high source	Red	
ETC ZF ET2	40344	(Valve Splitter) Short circuit to positive at output stage to Y4		6	06	Shorted to high source	Red	
ETC ZF ET2	40345	(Valve Select) Short circuit to positive at output stage to Y5		6		Shorted to high source	Red	
ETC ZF ET2	40346	(Valve Select) Short circuit to positive at output stage to Y6		6		Shorted to high source	Red	
		(Valve Shift) Short circuit to positive at output stage to Yo (valve Shift)						
ETC ZF ET2	40347	(Valve Shift)		6		Shorted to high source	Red	
ETC ZF ET2	40348	Short circuit to positive at output stage to Y8 (Valve range low)		6		Shorted to high source	Red	
ETC ZF ET2	40349	Short circuit to positive at output stage to Y9 (Valve range high)		6	06	Shorted to high source	Red	
ETC ZF ET2	4034A	Short circuit to positive at output stage to Y10 (Main valve)		6	06	Shorted to high source	Yellow	
ETC ZF ET2	4034B	Short circuit to ground at output stage to		6	06	Shorted to high source	Yellow	
ETC ZF ET2	4034C	warning buzzer (shift-lever) Short circuit to positive at output stage to		6	06	Shorted to high source	Yellow	
ETC ZF ET2	4034D	reverse light relay Short circuit to positive at output stage to		6	06	Shorted to high source	Yellow	
ETC ZF ET2	4034E	PTO 1 Short circuit to positive at output stage to		6		Shorted to high source	Yellow	
ETC ZF ET2	40342	PTO 2 Short circuit to positive at output stage to PTO 2 Short circuit to positive at output stage to Y1		6		Shorted to high source	Yellow	
		(inertia brake valve)						
ETC ZF ET2	40352	Short circuit to positive at output stage to small diseng. clutch valve		6	06	Shorted to high source	Red	

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ECU Name	SPN [Hex]	Fault Component	Description		FMI [HEX]	FMI Description	Lamp status	Comment
ETC ZF ET2	40353	Short circuit to positive at output stage to small eng. clutch valve		6		Shorted to high source	Red	
ETC ZF ET2	40354	Short circuit to positive at output stage to large diseng. clutch valve		6		Shorted to high source	Red	
ETC ZF ET2	40355	Short circuit to positive at output stage to large eng. clutch valve		6	06	Shorted to high source	Red	
ETC ZF ET2	40356	Short circuit to positive at output ADVP (wakeup control signal for shift-lever, voltage	3	6	06	Shorted to high source	Yellow	
		supply to display, warning buzzer, output speed sensor 1)						
ETC ZF ET2	40359	Short circuit to positive at output SD to display		0	00	No fault sympton available for this DTC	Yellow	
ETC ZF ET2	4035A	Communication error between controller 1 and controller 2 (ECU failure)		9	09	Device error	Red	
ETC ZF ET2 ETC ZF ET2	4035B 4035C	CAN EBC1 timeout Error on "ABS active" signal (EBC1)		4 8		No signal Invalid signal	Yellow Yellow	
ETC ZF ET2	4035D	Error on "ASR engine control active" signal (EBC1)		8		Invalid signal	Yellow	
ETC ZF ET2	4035E	Error on "ASR brake control active" signal (EBC1)		8	80	Invalid signal	Yellow	
ETC ZF ET2	4035F	Error on "Cruise control active" signal (CCVS)		8	80	Invalid signal	Yellow	
ETC ZF ET2	40360	Error on "Cruise control set speed" (CCVS)		8	80	Invalid signal	Yellow	
ETC ZF ET2 ETC ZF ET2	40361 40362	Error on "Engine speed" signal (EEC1) Error on transmission input speed signal		8		Invalid signal Invalid signal	Yellow Yellow	
ETC ZF ET2 ETC ZF ET2	40363 40364	Error on output speed signal 1 Error on output speed signal 2		8	80	Invalid signal Invalid signal	Yellow Yellow	
ETC ZF ET2 ETC ZF ET2	40365	Error on both output speed signals		8	80	Invalid signal	Red	
ETC ZF ET2	40366 40367	Plausibility error between transmission input CAN CCVS error on wheel based vehicle		0	00	Not plausible No fault sympton available for this DTC	Yellow	
ETC ZF ET2	40368	High voltage (Vehicle electrical system voltage too high)		1		Above maximum range	Yellow	
ETC ZF ET2	40369	Low voltage (Vehicle electrical system voltage too low)		2		Below maximum threshold	Red	
ETC ZF ET2	4036B	Stabilised voltage supply at output AU (clutch sensor supply) out of valid range	h	2		Below maximum threshold	Yellow	
ETC ZF ET2 ETC ZF ET2	4036C 4036E	Error in selector lever or tip lever Lever CAN timeout		0	00	No fault sympton available for this DTC No fault sympton available for this DTC	Yellow Yellow	
ETC ZF ET2	40371	Error on "Driveline retarder configuration timeout"		4		No signal	Yellow	
ETC ZF ET2	40372	Clutch engaged unintentionally in standstill, gear engaged		0		No fault sympton available for this DTC	Red	
ETC ZF ET2 ETC ZF ET2	40375 40376	Error in clutch self-adjustment process Clutch does not disengage		0	00	No fault sympton available for this DTC No fault sympton available for this DTC	Red Red	
ETC ZF ET2	40377	Clutch does not engage / does not transmit engine torque		0	00	No fault sympton available for this DTC	Red	
ETC ZF ET2	40378	Mechanical failure of small disengagement clutch valve		0		No fault sympton available for this DTC	Yellow	
ETC ZF ET2	40379	Mechanical failure of large disengagement clutch valve		0	00	No fault sympton available for this DTC	Yellow	
ETC ZF ET2	4037A	Mechanical failure of small engagement clutch valve		0		No fault sympton available for this DTC	Yellow	
ETC ZF ET2	4037B	Mechanical failure of large engagement clutch valve		0	00	No fault sympton available for this DTC	Yellow	
ETC ZF ET2 ETC ZF ET2	4037C 4037E	Error on clutch travel signal Error on pressure sensor signal		0		No fault sympton available for this DTC Not plausible	Yellow Yellow	
ETC ZF ET2 ETC ZF ET2	4037F 40380	Error on ECU temperature sensor signal Error on oil temperature sensor signal		3	03	Not plausible No fault sympton available for this DTC	Yellow Yellow	
ETC ZF ET2	40381	No shift sensor signal (Short circuit to positive)		6		Shorted to high source	Yellow	
ETC ZF ET2	40382	No shift sensor signal (Short circuit to ground)		5	05	Shorted to low source	Yellow	
ETC ZF ET2 ETC ZF ET2	40383 40384	No shift sensor signal (Interruption) Self adjustment error of shift sensor		10 0		Disconnection No fault sympton available for this DTC	Yellow Red	
ETC ZF ET2	40385	No gate select sensor signal (Short circuit to positive)		6		Shorted to high source	Yellow	
ETC ZF ET2	40386	No gate select sensor signal (Short circuit to		5	05	Shorted to low source	Yellow	
ETC ZF ET2	40387	ground) No gate select sensor signal (Interruption)		10		Disconnection No fault sympton available for this DTC	Yellow	
ETC ZF ET2 ETC ZF ET2	40388 40389	Gate select sensor self adjustment error No range change group (GP) sensor signal		6		Shorted to high source	Red Yellow	
ETC ZF ET2	4038A	(Short circuit to positive) No range change group (GP) sensor signal		5	05	Shorted to low source	Yellow	
ETC ZF ET2	4038B	(Short circuit to ground) No range change group (GP) sensor signal		10	0A	Disconnection	Yellow	
ETC ZF ET2	4038C	(Interruption) Self adjustment error of range change group		0	00	No fault sympton available for this DTC	Red	
ETC ZF ET2	4038D	sensor in position fast No splitter group (GV) sensor signal (Short		6	06	Shorted to high source	Yellow	
ETC ZF ET2	4038E	circuit to positive) No splitter group (GV) sensor signal (Short		5	05	Shorted to low source	Yellow	
ETC ZF ET2	4038F	circuit to ground) No splitter group (GV) sensor signal		10	0A	Disconnection	Yellow	
ETC ZF ET2	40390	(Interruption) Splitter group (GV) sensor self adjustment		0	00	No fault sympton available for this DTC	Red	
ETC ZF ET2	40391	error Range change group (GP) disengagement		0	00	No fault sympton available for this DTC	Yellow	
ETC ZF ET2	40392	error Changeover error during range change		0	00	No fault sympton available for this DTC	Yellow	
ETC ZF ET2	40393	group (GP) shifting Range change group (GP) does not engage		0	00	No fault sympton available for this DTC	Red	
ETC ZF ET2	40394	Splitter (GV) does not disengage		0	00	No fault sympton available for this DTC	Yellow	
ETC ZF ET2 ETC ZF ET2	40395 40396	Change over error during splitter shifting Splitter (GV) does not engage		0	00	No fault sympton available for this DTC No fault sympton available for this DTC	Yellow Red	
ETC ZF ET2 ETC ZF ET2	40397 40398	Selector cylinder does not disengage Change over error during gate selection		0 0		No fault sympton available for this DTC No fault sympton available for this DTC	Yellow Yellow	
ETC ZF ET2	40399	procedure Selector cylinder does not engage		0	00	No fault sympton available for this DTC	Red	
ETC ZF ET2	4039A	Main transmission gear does not disengage		0		No fault sympton available for this DTC	Red	
ETC ZF ET2 ETC ZF ET2	4039B 4039C	Main transmission gear does not engage Wrong gear shifting		0		No fault sympton available for this DTC No fault sympton available for this DTC	Red Red	
ETC ZF ET2	4039E	Shift sensor signal leaves engaged position during driving		0		No fault sympton available for this DTC	Yellow	
ETC ZF ET2	4039F	Range-change group sensor signal leaves engaged position during driving		0	00	No fault sympton available for this DTC	Yellow	
ETC ZF ET2	403A0	Splitter sensor signal leaves engaged position during driving		0	00			
ETC ZF ET2	403A3	Engine does not react on torque intervention			00	No fault sympton available for this DTC	Yellow	
ETC ZF ET2				0		No fault sympton available for this DTC No fault sympton available for this DTC	Yellow	
ETC ZF ET2	403A4	Error on "Drivers demand engine percent torque" (EEC1)		0	00			
	403A4 403A5	Error on "Drivers demand engine percent torque" (EEC1) Error on "Accelerator pedal position" (EEC2)			00	No fault sympton available for this DTC	Yellow	
ETC ZF ET2	403A5 403A6	torque" (EEC1) Error on "Accelerator pedal position" (EEC2) Permanent idle signal		8 8	00 08 08	No fault sympton available for this DTC Invalid signal Invalid signal No fault sympton available for this DTC	Yellow Yellow Yellow	
ETC ZF ET2 ETC ZF ET2	403A5	torque" (EEC1) Error on "Accelerator pedal position" (EEC2)		8	00 08 08	No fault sympton available for this DTC Invalid signal Invalid signal	Yellow Yellow Yellow	
ETC ZF ET2	403A5 403A6 403A8 403A9	torque" (EEC1) Error on "Accelerator pedal position" (EEC2) Permanent idle signal No idle signal or error on "idle signal switch" signal (EEC2) or never active "idle signal" Cut-off relay in ECU does not switch off		8 8 0 8	00 08 08 00 00	No fault sympton available for this DTC Invalid signal Invalid signal No fault sympton available for this DTC Invalid signal No fault sympton available for this DTC	Yellow Yellow Yellow Yellow Yellow Red	
ETC ZF ET2 ETC ZF ET2 ETC ZF ET2	403A5 403A6 403A8 403A9 403AA	torque" (EEC1) Error on "Accelerator pedal position" (EEC2) Permanent idle signal No idle signal or error on "idle signal switch" signal (EEC2) or never active "idle signal" Cut-off relay in ECU does not switch off No voltage supply at pin 30 or cut-off relay in ECU does not switch on		8 0 8 0	00 08 08 00 00 08	No fault sympton available for this DTC Invalid signal Invalid signal No fault sympton available for this DTC Invalid signal No fault sympton available for this DTC No fault sympton available for this DTC	Yellow Yellow Yellow Yellow Yellow Red Red	
ETC ZF ET2 ETC ZF ET2 ETC ZF ET2 ETC ZF ET2	403A5 403A6 403A8 403A9 403AA 403AB	torque" (EEC1) Error on "Accelerator pedal position" (EEC2) Permanent idle signal No idle signal or error on "idle signal switch" signal (EEC2) or never active "idle signal" Cut-off relay in ECU does not switch off No voltage supply at pin 30 or cut-off relay in ECU does not switch on Error on "Actual engine percent torque" signal (EEC1)		8 8 0 8	00 08 08 00 00 08	No fault sympton available for this DTC Invalid signal Invalid signal No fault sympton available for this DTC Invalid signal No fault sympton available for this DTC No fault sympton available for this DTC Invalid signal	Yellow Yellow Yellow Yellow Yellow Red Red Yellow	
ETC ZF ET2	403A5 403A6 403A8 403A9 403AA 403AB 403AE 403AF	torque" (EEC1) Error on "Accelerator pedal position" (EEC2) Permanent idle signal No idle signal or error on "idle signal switch" signal (EEC2) or never active "idle signal" Cut-off relay in ECU does not switch off No voltage supply at pin 30 or cut-off relay in ECU does not switch on Error on "Actual engine percent torque" signal (EEC1) Error on "Kickdown switch" signal (EEC2) Error on "Ignition lock" signal (terminal 15)		8 8 0 8 0 0 0	00 08 08 00 08 00 00 00 00 08	No fault sympton available for this DTC Invalid signal Invalid signal No fault sympton available for this DTC Invalid signal No fault sympton available for this DTC No fault sympton available for this DTC Invalid signal Invalid signal Invalid signal Invalid signal No signal	Yellow Yellow Yellow Yellow Yellow Red Red Yellow Yellow Yellow Yellow	
ETC ZF ET2	403A5 403A6 403A8 403A9 403AA 403AB 403AE 403AF 403B1 403B2	torque" (EEC1) Error on "Accelerator pedal position" (EEC2) Permanent idle signal No idle signal or error on "idle signal switch" signal (EEC2) or never active "idle signal" Cut-off relay in ECU does not switch off No voltage supply at pin 30 or cut-off relay in ECU does not switch on Error on "Actual engine percent torque" signal (EEC1) Error on "Kickdown switch" signal (EEC2) Error on "Ignition lock" signal (terminal 15) System-CAN Busoff error CAN Errorwarning		8 0 8 0 0 8 8 8 4 4 4	00 08 08 00 08 00 00 00 00 08	No fault sympton available for this DTC Invalid signal Invalid signal No fault sympton available for this DTC Invalid signal No fault sympton available for this DTC No fault sympton available for this DTC Invalid signal Invalid signal Invalid signal No signal No signal No signal No signal	Yellow Yellow Yellow Yellow Red Red Yellow Yellow Yellow Red Red Red Red Red	
ETC ZF ET2	403A5 403A6 403A8 403A9 403AA 403AB 403AF 403B1 403B2 403B3 403B3	torque" (EEC1) Error on "Accelerator pedal position" (EEC2) Permanent idle signal No idle signal or error on "idle signal switch" signal (EEC2) or never active "idle signal' Cut-off relay in ECU does not switch off No voltage supply at pin 30 or cut-off relay in ECU does not switch on Error on "Actual engine percent torque" signal (EEC1) Error on "Kickdown switch" signal (EEC2) Error on "Ignition lock" signal (terminal 15) System-CAN Busoff error CAN Errorwarning CAN queue overrun CAN EEC1 timeout		8 8 0 0 0 0 8 8 8 4 4 4 4 0 4	00 08 08 00 08 00 00 00 08 08	No fault sympton available for this DTC Invalid signal Invalid signal No fault sympton available for this DTC Invalid signal No fault sympton available for this DTC No fault sympton available for this DTC Invalid signal Invalid signal Invalid signal No signal No signal No signal No fault sympton available for this DTC	Yellow Yellow Yellow Yellow Yellow Red Red Yellow Yellow Yellow Red Red Red Red Red Red Red	
ETC ZF ET2	403A5 403A6 403A9 403A9 403AA 403AB 403B1 403B1 403B2 403B3 403B4 403B4 403B5	torque" (EEC1) Error on "Accelerator pedal position" (EEC2) Permanent idle signal No idle signal or error on "idle signal switch" signal (EEC2) or never active "idle signal" Cut-off relay in ECU does not switch off No voltage supply at pin 30 or cut-off relay in ECU does not switch on Error on "Actual engine percent torque" signal (EEC1) Error on "ikickdown switch" signal (EEC2) Error on "ignition lock" signal (terminal 15) System-CAN Busoff error CAN Errorwarning CAN queue overrun CAN EEC1 timeout CAN EC2 timeout CAN EC2 timeout		8 8 0 8 0 0 0 8 8 4 4 4 0 4 4	00 08 08 00 00 00 00 00 00 08 08	No fault sympton available for this DTC Invalid signal Invalid signal No fault sympton available for this DTC Invalid signal No fault sympton available for this DTC No fault sympton available for this DTC Invalid signal Invalid signal Invalid signal No signal	Yellow Yellow Yellow Yellow Red Red Yellow Yellow Red	
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ETC ZF ET2	403A5 403A6 403A8 403A9 403AA 403AB 403AB 403B1 403B2 403B3 403B4 403B6 403B6 403B6 403BC 403BC	torque" (EEC1) Error on "Accelerator pedal position" (EEC2) Permanent idle signal No idle signal or error on "idle signal switch" signal (EEC2) or never active "idle signal" Cut-off relay in ECU does not switch off No voltage supply at pin 30 or cut-off relay in ECU does not switch on Error on "Actual engine percent torque" signal (EEC1) Error on "Kickdown switch" signal (EEC2) Error on "ignition lock" signal (terminal 15) System-CAN Busoff error CAN Errorwarning CAN queue overrun CAN EEC1 timeout CAN EC2 timeout CAN EC1_ER timeout CAN ERC1_ER timeout CAN ERC1_DR timeout ECU fault - wrong interrupt ECU fault - stack watch		8 8 0 0 0 8 8 8 8 4 4 4 4 4 4 4 4 4 4 4	00 08 08 00 00 00 00 00 00 00	No fault sympton available for this DTC Invalid signal Invalid signal No fault sympton available for this DTC Invalid signal No fault sympton available for this DTC No fault sympton available for this DTC Invalid signal Invalid signal Invalid signal No signal No signal No signal No fault sympton available for this DTC No fault sympton available for this DTC No signal No fault sympton available for this DTC No fault sympton available for this DTC	Yellow Yellow Yellow Yellow Red Red Yellow Yellow Yellow Yellow Yellow Red	
ETC ZF ET2	403A5 403A6 403A8 403A9 403AA 403AB 403AF 403B1 403B2 403B3 403B4 403B5 403B5 403B5 403B6 403BC 403BC 403BE	torque" (EEC1) Error on "Accelerator pedal position" (EEC2) Permanent idle signal No idle signal or error on "idle signal switch" signal (EEC2) or never active "idle signal' signal (EEC2) or never active "idle signal' idle signal in ECU does not switch off No voltage supply at pin 30 or cut-off relay in ECU does not switch on Error on "Actual engine percent torque" signal (EEC1) Error on "Rickdown switch" signal (EEC2) Error on "Rijnition lock" signal (terminal 15) System-CAN Busoff error CAN Errorwarning CAN queue overrun CAN EC1 timeout CAN EC2 timeout CAN EC3 timeout CAN EC1 ER timeout CAN ERC1 ER timeout CAN ERC1 ER timeout ECU fault - wrong interrupt ECU fault - stack watch ECU EPROM parameter out of valid range		8 8 0 0 8 8 8 4 4 4 4 4 4 4 4 4 4 4 4 0 0	00 08 08 00 00 00 00 00 08 08	No fault sympton available for this DTC Invalid signal Invalid signal No fault sympton available for this DTC Invalid signal No fault sympton available for this DTC No fault sympton available for this DTC Invalid signal Invalid signal No signal No signal No signal No signal No signal No fault sympton available for this DTC No fault sympton available for this DTC No signal No fault sympton available for this DTC No fault sympton available for this DTC No fault sympton available for this DTC	Yellow Yellow Yellow Yellow Red Red Yellow Yellow Red	
ETC ZF ET2	403A5 403A6 403A8 403A9 403AA 403AB 403AB 403AF 403B1 403B1 403B2 403B3 403B6 403B6 403B6 403B6 403B7 403B6 403B7 403B8 403BC 403BF 403BF 403BF 403BF	torque" (EEC1) Error on "Accelerator pedal position" (EEC2) Permanent idle signal No idle signal or error on "idle signal switch" signal (EEC2) or never active "idle signal" Cut-off relay in ECU does not switch off No voltage supply at pin 30 or cut-off relay in ECU does not switch on Error on "Actual engine percent torque" signal (EEC1) Error on "Kickdown switch" signal (EEC2) Error on "Ignition lock" signal (terminal 15) System-CAN Busoff error CAN Errorwarning CAN queue overrun CAN EEC1 timeout CAN EC2 timeout CAN EC2 timeout CAN ERC1_ER timeout CAN ERC1_ER timeout ECU fault - wrong interrupt ECU fault - wrong interrupt ECU fault - stack watch ECL EEPROM parameter checksum error ECU fault - EEPROM access failure		8 8 0 0 0 8 8 8 8 4 4 4 4 4 4 4 4 4 4 0 0 0 0	00 08 08 00 00 00 00 00 08 08	No fault sympton available for this DTC Invalid signal Invalid signal Invalid signal No fault sympton available for this DTC Invalid signal No fault sympton available for this DTC No fault sympton available for this DTC Invalid signal Invalid signal Invalid signal No signal No signal No signal No fault sympton available for this DTC No fault sympton available for this DTC No signal No fault sympton available for this DTC	Yellow Yellow Yellow Yellow Yellow Red Red Yellow Yellow Yellow Yellow Red Red Red Red Red Yellow Red Red Red Red Red Red Red Yellow Red	
ETC ZF ET2	403A5 403A6 403A8 403A9 403AA 403AB 403AB 403AB 403B1 403B2 403B3 403B4 403B6 403B7 403BC	torque" (EEC1) Error on "Accelerator pedal position" (EEC2) Permanent idle signal No idle signal or error on "idle signal switch" signal (EEC2) or never active "idle signal' signal (EEC2) or never active "idle signal' Cut-off relay in ECU does not switch off No voltage supply at pin 30 or cut-off relay in ECU does not switch on Error on "Actual engine percent torque" signal (EEC1) Error on "Kickdown switch" signal (EEC2) Error on "ignition lock" signal (terminal 15) System-CAN Busoff error CAN Errorwarning CAN queue overrun CAN EC1 timeout CAN EC2 timeout CAN EC1_ER timeout CAN ERC1_ER timeout CAN ERC1_ER timeout ECU fault - stack watch ECU fault - stack watch EOL EEPROM parameter out of valid range EOL EEPROM parameter checksum error ECU fault - EEPROM access failure ECU temperature too high Both sources for front axle speed not		8 8 0 0 0 0 8 8 8 4 4 4 4 4 4 4 4 4 4 4	00 08 08 08 00 00 00 00 00 00	No fault sympton available for this DTC Invalid signal Invalid signal Invalid signal No fault sympton available for this DTC Invalid signal No fault sympton available for this DTC No fault sympton available for this DTC Invalid signal Invalid signal Invalid signal No signal No signal No signal No fault sympton available for this DTC No fault sympton available for this DTC No signal No fault sympton available for this DTC	Yellow Yellow Yellow Yellow Red Red Yellow Yellow Yellow Yellow Red	
ETC ZF ET2	403A5 403A6 403A8 403A8 403AB 403AB 403AB 403AB 403B1 403B2 403B3 403B4 403B6 403B6 403B6 403B6 403B6 403B7 403BB 403BC	torque" (EEC1) Error on "Accelerator pedal position" (EEC2) Permanent idle signal No idle signal or error on "idle signal switch" signal (EEC2) or never active "idle signal" Gut-off relay in ECU does not switch off No voltage supply at pin 30 or cut-off relay in ECU does not switch on Error on "Actual engine percent torque" signal (EEC1) Error on "Kickdown switch" signal (EEC2) Error on "Rickdown switch" signal (EEC2) Error on "Ignition lock" signal (terminal 15) System-CAN Busoff error CAN Errorwarning CAN queue overrun CAN EC1 timeout CAN EC2 timeout CAN EC2 timeout CAN EC1 ER timeout CAN EC1 ER timeout CAN EC1 ER timeout ECU fault - stack watch ECU fault - stack watch ECU EEPROM parameter out of valid range ECU EEPROM parameter checksum error ECU fault - EEPROM access failure ECU temperature too high Both sources for front axle speed not available Error on "Front axle speed" (WSI)		8 8 0 0 8 8 8 8 4 4 4 4 4 4 4 4 4 4 4 0 0 0 0	00 08 08 08 00 00 00 00 00 00	No fault sympton available for this DTC Invalid signal Invalid signal No fault sympton available for this DTC Invalid signal No fault sympton available for this DTC No fault sympton available for this DTC Invalid signal No fault sympton available for this DTC No fault sympton available for this DTC No signal No fault sympton available for this DTC Above maximum range No fault sympton available for this DTC	Yellow Yellow Yellow Yellow Yellow Red Red Yellow Red	
ETC ZF ET2	403A5 403A6 403A8 403A9 403AA 403AB 403AB 403AF 403B1 403B2 403B3 403B6 403B6 403B6 403B6 403B6 403B6 403B7 403B6 403B7 403B6 403B7 403B6 403B7 403B6 403B7 403B6 403B7 403B7 403B8	torque" (EEC1) Error on "Accelerator pedal position" (EEC2) Permanent idle signal No idle signal or error on "idle signal switch" signal (EEC2) or never active "idle signal" Cut-off relay in ECU does not switch off No voltage supply at pin 30 or cut-off relay in ECU does not switch on Error on "Actual engine percent torque" signal (EEC1) Error on "ignition lock" signal (terminal 15) System-CAN Busoff error CAN Errorwarning CAN queue overrun CAN EC1 timeout CAN EC2 timeout CAN EC2 timeout CAN EC1 ER timeout CAN EC1 ER timeout ECU fault - wrong interrupt ECU fault - stack watch EOL EEPROM parameter out of valid range EOL EEPROM parameter checksum error ECU fault - EEPROM access failure ECU temperature too high Both sources for front axle speed not available		8 8 0 0 8 8 8 8 4 4 4 4 4 4 4 4 4 4 4 4	00 08 08 00 00 00 00 00 00 00	No fault sympton available for this DTC Invalid signal Invalid signal No fault sympton available for this DTC Invalid signal No fault sympton available for this DTC No fault sympton available for this DTC Invalid signal Invalid signal Invalid signal Invalid signal No signal No signal No signal No signal No fault sympton available for this DTC No signal No fault sympton available for this DTC	Yellow Yellow Yellow Yellow Yellow Red Red Yellow Yellow Yellow Red	
ETC ZF ET2	403A5 403A6 403A8 403A8 403AB 403AB 403AB 403AB 403B1 403B1 403B2 403B3 403B4 403B5 403B6 403B7 403BC 403C	torque" (EEC1) Error on "Accelerator pedal position" (EEC2) Permanent idle signal No idle signal or error on "idle signal switch" signal (EEC2) or never active "idle signal' signal (EEC2) or never active "idle signal' Cut-off relay in ECU does not switch off No voltage supply at pin 30 or cut-off relay in ECU does not switch on Error on "Actual engine percent torque" signal (EEC1) Error on "Kickdown switch" signal (EEC2) Error on "ignition lock" signal (terminal 15) System-CAN Busoff error CAN Errorwarning CAN queue overrun CAN EC1 timeout CAN EC2 timeout CAN EC1 ER timeout CAN EC1 PR timeout ECU fault - wrong interrupt ECU fault - stack watch EOL EEPROM parameter out of valid range EOL EEPROM parameter checksum error ECU fault - EEPROM access failure ECU temperature too high Both sources for front axle speed not available Error on "Front axle speed" (WSI) CAN Will timeout		8 8 0 0 8 8 8 4 4 4 4 4 4 4 4 4 4 4 0 0 0 0	00 08 08 00 08 00 00 00 00 00	No fault sympton available for this DTC Invalid signal Invalid signal No fault sympton available for this DTC Invalid signal No fault sympton available for this DTC No fault sympton available for this DTC Invalid signal Invalid signal No fault sympton available for this DTC Invalid signal No signal	Yellow Yellow Yellow Yellow Yellow Red Red Yellow Red	
ETC ZF ET2	403A5 403A6 403A8 403A9 403AA 403AB 403AB 403AE 403AF 403B1 403B2 403B3 403B4 403B6 403B6 403B6 403B6 403B6 403B7 403B6 403B7 403B6 403B7 403B7 403B8	torque" (EEC1) Error on "Accelerator pedal position" (EEC2) Permanent idle signal No idle signal or error on "idle signal switch" signal (EEC2) or never active "idle signal" Cut-off relay in ECU does not switch off No voltage supply at pin 30 or cut-off relay in ECU does not switch on Error on "Actual engine percent torque" signal (EEC1) Error on "ignition lock" signal (terminal 15) System-CAN Busoff error CAN Errorwarning CAN queue overrun CAN EC1 timeout CAN EC2 timeout CAN EC2 timeout CAN EC2 timeout CAN EC1 ER timeout CAN EC1 ER timeout ECU fault - wrong interrupt ECU fault - stack watch EOL EEPROM parameter out of valid range ECU temperature too high Both sources for front axle speed not available Error on "Front axle speed" (WSI) CAN WSI timeout Application-Error database for CAN- communication EEPROM checksum	Physical memory fault Checksum failure is detected	8 8 0 0 8 8 8 8 4 4 4 4 4 4 4 4 4 4 4 4	00 08 08 00 00 00 00 00 00 00 00 00 00 0	No fault sympton available for this DTC Invalid signal Invalid signal Invalid signal No fault sympton available for this DTC Invalid signal No fault sympton available for this DTC No fault sympton available for this DTC Invalid signal Invalid signal Invalid signal No signal No signal No signal No fault sympton available for this DTC No signal No fault sympton available for this DTC Invalid signal No signal No signal No signal No signal No signal	Yellow Yellow Yellow Yellow Yellow Red	
ETC ZF ET2	403A5 403A6 403A8 403A9 403AA 403AB 403AB 403AF 403B1 403B2 403B3 403B4 403B6 403B6 403B6 403B6 403B6 403B7 403B6 403B7 403B6 403B7 403B8 403B6 403B7 403B8 403B6 403B7 403B8 403B7 403B8 40	torque" (EEC1) Error on "Accelerator pedal position" (EEC2) Permanent idle signal No idle signal or error on "idle signal switch" signal (EEC2) or never active "idle signal' signal (EEC2) or never active "idle signal' cut-off relay in ECU does not switch off No voltage supply at pin 30 or cut-off relay in ECU does not switch on Error on "Actual engine percent torque" signal (EEC1) Error on "Kickdown switch" signal (EEC2) Error on "ignition lock" signal (terminal 15) System-CAN Busoff error CAN Errorwarning CAN queue overrun CAN EC1 timeout CAN EC2 timeout CAN EC1 ER timeout CAN EC1 PR timeout CAN EC1 PR timeout ECU fault - wrong interrupt ECU fault - stack watch EOL EEPROM parameter out of valid range EOL EEPROM parameter checksum error ECU fault - EEPROM access failure ECU temperature too high Both sources for front axle speed not available Error on "Front axle speed" (WSI) CAN WSI timeout IVECO:CAN message BC_TC timeout Application-Error database for CAN-communication EEPROM checksum Ignition Key (15) over CAN fault		8 0 8 0 0 8 8 8 4 4 4 4 4 4 4 4 4 4 4 4 4	00 08 08 08 00 00 00 00 00 00	No fault sympton available for this DTC Invalid signal Invalid signal Invalid signal No fault sympton available for this DTC Invalid signal No fault sympton available for this DTC No fault sympton available for this DTC Invalid signal Invalid signal Invalid signal No signal No signal No signal No fault sympton available for this DTC No signal No fault sympton available for this DTC Invalid signal No signal No signal No signal No signal No signal	Yellow Yellow Yellow Yellow Yellow Red	
ETC ZF ET2 ETC ZF ET0	403A5 403A6 403A8 403A8 403AB 403AB 403AB 403AB 403B1 403B1 403B2 403B3 403B4 403B5 403B6 403B7 403B6 403B7 403B0 403B1 403B2 403B3	torque" (EEC1) Error on "Accelerator pedal position" (EEC2) Permanent idle signal No idle signal or error on "idle signal switch" signal (EEC2) or never active "idle signal' signal (EEC2) or never active "idle signal' idle signal or error on "idle signal switch" signal (EEC2) or never active "idle signal' ECU does not switch off No voltage supply at pin 30 or cut-off relay in ECU does not switch on Error on "Actual engine percent torque" signal (EEC1) Error on "Kickdown switch" signal (EEC2) Error on "Ignition lock" signal (terminal 15) System-CAN Busoff error CAN Errorwarning CAN queue overrun CAN EC2 timeout CAN EC2 timeout CAN EC2 timeout CAN EC1 ER timeout CAN EC1 ER timeout CAN EC1 ER timeout ECU fault - stack watch EOL EEPROM parameter out of valid range	Physical memory fault. Checksum failure is detected Signal not plausible with <i>Ignition Key (15) over CAN</i> Signal not plausible with <i>Ignition Key (15)</i> Defect, access not possible. Stepper motor failure is present. Fuel Level interface failure detected.	8 8 0 8 8 8 8 4 4 4 4 4 4 4 4 4 4 4 4 6 0 0 0 0 0 0 0 0 0 0 0 0 0	00 08 08 00 00 00 00 00 00 00 00 00 00 0	No fault sympton available for this DTC Invalid signal Invalid signal Invalid signal No fault sympton available for this DTC Invalid signal No fault sympton available for this DTC No fault sympton available for this DTC Invalid signal Invalid signal Invalid signal No signal No signal No fault sympton available for this DTC No signal No fault sympton available for this DTC Invalid signal No signal No signal No signal No signal No signal	Yellow Yellow Yellow Yellow Yellow Red Red Yellow Red	
ETC ZF ET2 ETC ZF ET3 ETC ZF ET4 ETC ZF ET5 ETC ZF ET6 ETC ZF ET7	403A5 403A6 403A8 403A8 403A8 403AB 403AB 403B1 403B2 403B3 403B4 403B5 403B6 403B6 403B6 403B7 403B6 403BC 40	torque" (EEC1) Error on "Accelerator pedal position" (EEC2) Permanent idle signal No idle signal or error on "idle signal switch" signal (EEC2) or never active "idle signal" Cut-off relay in ECU does not switch off No voltage supply at pin 30 or cut-off relay in ECU does not switch on Error on "Actual engine percent torque" signal (EEC1) Error on "Rickdown switch" signal (EEC2) Error on "Rijnition lock" signal (terminal 15) System-CAN Busoff error CAN Errorwarning CAN queue overrun CAN EEC1 timeout CAN EEC2 timeout CAN EEC2 timeout CAN ECC2 timeout CAN ERC1 ER timeout CAN ERC1 ER timeout ECU fault - wrong interrupt ECU fault - stack watch EOL EEPROM parameter out of valid range EOL EEPROM parameter out of valid range ECU temperature too high Both sources for front axle speed not available Error on "Front axle speed" (WSI) CAN WSI timeout Application-Error database for CAN-communication EEPROM checksum Ignition Key (15) fault Ignition Key (15) fover CAN fault Stepper Motor	Physical memory fault. Checksum failure is detected Signal not plausible with <i>Ignition Key (15) over CAN</i> Signal not plausible with <i>Ignition Key (15)</i> Defect, access not possible. Stepper motor failure is present.	8 8 0 0 8 8 8 8 4 4 4 4 4 4 4 4 4 4 4 4 4	00 08 08 00 00 00 00 00 00 00 00 00 00 0	No fault sympton available for this DTC Invalid signal Invalid signal No fault sympton available for this DTC Invalid signal No fault sympton available for this DTC No fault sympton available for this DTC Invalid signal Invalid signal Invalid signal No fault sympton available for this DTC No signal No fault sympton available for this DTC	Yellow Yellow Yellow Yellow Yellow Red Red Yellow Yellow Yellow Red Red Red Red Red Red Yellow Red	
ETC ZF ET2 ETC ZF ET0 ETC ZF	403A5 403A6 403A8 403A8 403AB 403AB 403AB 403AB 403AB 403B1 403B1 403B2 403B3 403B4 403B5 403B6 403B7 403BB 403BC 403BB 403BC 40	torque" (EEC1) Error on "Accelerator pedal position" (EEC2) Permanent idle signal No idle signal or error on "idle signal switch" signal (EEC2) or never active "idle signal' signal (EEC2) or never active "idle signal' signal (EEC2) or never active "idle signal' Cut-off relay in ECU does not switch off No voltage supply at pin 30 or cut-off relay in ECU does not switch on Error on "Actual engine percent torque" signal (EEC1) Error on "Kickdown switch" signal (EEC2) Error on "ignition lock" signal (terminal 15) System-CAN Busoff error CAN Errorwarning CAN queue overrun CAN EC1 timeout CAN EC2 timeout CAN EC1 Ent timeout CAN EC1 Ent timeout ECU fault - wrong interrupt ECU fault - stack watch EOL EEPROM parameter out of valid range EOL EEPROM parameter checksum error ECU fault - EEPROM access failure ECU temperature too high Both sources for front axle speed not available Error on "Front axle speed" (WSI) CAN WSI timeout IVECO-CAN message BC TC timeout Application-Error database for CAN- communication EEPROM checksum Ignition Key (15) fault Ignition Key (15) fault Ignition Key (15) four CAN fault Stepper Motor Fuel Level Sensor	Physical memory fault. Checksum failure is detected Signal not plausible with <i>Ignition Key (15) over CAN</i> Signal not plausible with <i>Ignition Key (15)</i> Defect, access not possible. Stepper motor failure is present. Fuel Level interface failure detected. Debounce time (for fault active andinactive conditions) is 4s. The input voltage is evaluated for in-range checking:	8 8 0 0 8 8 8 4 4 4 4 4 4 4 4 4 4 4 4 6 0 0 0 0 0 0 0 0 0 0 0 0 0	00 08 08 00 00 00 00 00 00 00 00 00 00 0	No fault sympton available for this DTC Invalid signal Invalid signal No fault sympton available for this DTC Invalid signal No fault sympton available for this DTC No fault sympton available for this DTC Invalid signal Invalid signal Invalid signal No fault sympton available for this DTC No fault sympton available for this DTC	Yellow Yellow Yellow Yellow Yellow Red Red Yellow Yellow Yellow Red Red Red Red Red Red Red Yellow Red Red Yellow Red Red Yellow Red Red Red Yellow Red Red Yellow Red Red Yellow Red Yellow Yellow Yellow Yellow Yellow Red Red Yellow Yellow Yellow Yellow Yellow Yellow Yellow	
ETC ZF ET2 ETC ZF ET3 ETC ZF ET4 ETC ZF ET5 ETC ZF ET6 ETC ZF ET7	403A5 403A6 403A8 403A8 403A8 403AB 403AB 403B1 403B2 403B3 403B4 403B5 403B6 403B6 403B6 403B7 403B6 403BC 40	torque" (EEC1) Error on "Accelerator pedal position" (EEC2) Permanent idle signal No idle signal or error on "idle signal switch" signal (EEC2) or never active "idle signal' signal (EEC2) or never active "idle signal' signal (EEC2) or never active "idle signal' ECU does not switch off No voltage supply at pin 30 or cut-off relay in ECU does not switch on Error on "Actual engine percent torque" signal (EEC1) Error on "Kickdown switch" signal (EEC2) Error on "Rickdown switch" signal (EEC2) Error on "Ignition lock" signal (terminal 15) System-CAN Busoff error CAN Errorwarning CAN queue overrun CAN EEC1 timeout CAN EC2 timeout CAN EC2 timeout CAN ECC2 timeout CAN EC1 ER timeout CAN ERC1_DR timeout ECU fault - stack watch EOL EEPROM parameter out of valid range	Physical memory fault. Checksum failure is detected Signal not plausible with <i>Ignition Key (15) over CAN</i> Signal not plausible with <i>Ignition Key (15)</i> Defect, access not possible. Stepper motor failure is present. Fuel Level interface failure detected. Debounce time (for fault active andinactive conditions) is 4s.	8 8 0 0 8 8 8 8 4 4 4 4 4 4 4 4 4 4 4 4 4	00 08 08 08 08 08 08 08 08 08 08 08 08 0	No fault sympton available for this DTC Invalid signal Invalid signal No fault sympton available for this DTC Invalid signal No fault sympton available for this DTC No fault sympton available for this DTC Invalid signal Invalid signal Invalid signal No fault sympton available for this DTC No signal No fault sympton available for this DTC	Yellow Yellow Yellow Yellow Yellow Red Red Yellow Yellow Yellow Red Red Red Red Red Red Yellow Red	

FOU	ODN	Foult Comment	Description .	FMI	FMI		1	Assessed.
Name IC M06	SPN [Hex] 41708	Fault Component Reserved for:	Description A fault of the Indicator Lamp or on its driving circuitry is detected	[DEC]			Lamp status Yellow	Comment
IC M06	41709	OBD II Indicator Lamp (IL25)	A radit of the indicator Earlip of off its driving circuity is detected	12	0C		Yellow	
IC M06	4170A 4170B	Reserved for:	No CAN messages on CAN 2 or bus-off detection	12	0C 02		Yellow	
IC M06	4170C	CAN 2 Bus Vehicle Data Bus CAN	No CAN messages on Vehicle Data Bus or bus-off detection	2	02		Red	
IC M06	4170D 4170E	Vehicle Data Bus - ECU#1 CAN Vehicle Data Bus - ECU#2 CAN	No CAN messages from ECU#1 - IBC No CAN messages from ECU#2 - EDC or VCM	2	02 02		Red Red	
IC M06	4170F 41710	Vehicle Data Bus - ECU#3 CAN Vehicle Data Bus - ECU#4 CAN	No CAN messages from ECU#3 - TCO No CAN messages from ECU#4 - ETC	2	02 02		Red Red	
IC M06	41711	Vehicle Data Bus - ECU#5 CAN	No CAN messages from ECU#5 - EBC	2	02		ABS Yellow	
IC M06 IC M06	41712 41713	Vehicle Data Bus - ECU#6 CAN Vehicle Data Bus - ECU#7 CAN	No CAN messages from ECU#6 - ECAS	2 2	02		tell tale Yellow Yellow	
IC M06 IC M06	41713 41714 41715	Vehicle Data Bus - ECU#7 CAN Vehicle Data Bus - ECU#8 CAN Vehicle Data Bus - ECU#9 CAN	No CAN messages from ECU#7 - Driveline Retarder No CAN messages from ECU#8 - Mirror Controller No CAN messages from ECU#9 - Expansion Module	2 2	02		Yellow	
IC M06	41716 41717	Vehicle Data Bus - ECU#10 CAN Vehicle Data Bus - ECU#11 CAN Vehicle Data Bus - ECU#11 CAN	No CAN messages from ECU#10 - Steering Wheel Interface No CAN messages from ECU#11 - IVTM	2	02		Yellow Yellow	
IC M06	41718 41719	Vehicle Data Bus - ECU#12 CAN Vehicle Data Bus - ECU#13 CAN	No CAN messages from ECU#12 - ADM No CAN messages from ECU#13 - SCR	2	02		Yellow Yellow	
IC M06 IC SPR1 E4	4171A 21701	Vehicle Data Bus - ECU#14 CAN EEPROM checksum	No CAN messages from ECU#14 - LDWS Physical memory fault.Checksum failure is detected	2 12	02 0C		Yellow	
IC SPR1 E4	21704 21705	Stepper Motor Fuel Level Sensor	Defect, access not possible.Stepper motor failure is present. Fuel Level interface failure detected.	12	0C 03			
			Debounce time (for fault active andinactive conditions) is 4s. The input voltage is evaluated for in-range checking:					
IC SPR1 E4	21706	Oil Level Sensor	Oil level interface failure detected. The input voltage and the voltage difference between the first and the second acquisition are evaluated for in	00	01			
			range checking	03 04 15	03 04 0F	Voltage below normal (s.c. to ground)		
				16 17	10	Engine Starter Mode from EDC not available Engine Oil Temperature from EDC not available		
				18 19	12 13	Time could not be stored in EEPROM		
				20	14			
IC SPR1 E4	21707	Ambient Temperature Sensor	Ambient Temperature interface failure detected.Debounce time (for fault active and inactive conditions) is 4s.The input voltage is evaluated for in-	03 04	03 04			
IC SPR1 E4	2170C	Vehicle Data Bus CAN Vehicle Data Bus - ECU#1 CAN	range checking: No CAN messages on Vehicle Data Bus or bus-off detection No CAN messages from ECU#1 - IBC	2	02			
IC SPR1 E4 IC SPR1 E4 IC SPR1 E4	2170D 2170E 2170F	Vehicle Data Bus - ECU#1 CAN Vehicle Data Bus - ECU#2 CAN Vehicle Data Bus - ECU#3 CAN	NO CAN messages from ECU#1 - IBC No CAN messages from ECU#2 - EDC No CAN messages from ECU#3 - TCO	2 2	02 02 02			
IC SPR1 E4 IC SPR1 E4	21710 21710 21711	Vehicle Data Bus - ECU#4 CAN Vehicle Data Bus - ECU#4 CAN Vehicle Data Bus - ECU#5 CAN	No CAN messages from ECU#4 - ETC No CAN messages from ECU#4 - ETC	2	02			
IC SPR1 E4 IC SPR1 E4	21712 21713	Vehicle Data Bus - ECU#6 CAN Vehicle Data Bus - ECU#7 CAN	No CAN messages from ECU#6 - ECAS No CAN messages from ECU#7 - Driveline Retarder	2	02 02			
IC SPR1 E4 IC SPR1 E4	21714 21715	Vehicle Data Bus - ECU#8 CAN Vehicle Data Bus - ECU#9 CAN	No CAN messages from ECU#8 - Mirror Controller No CAN messages from ECU#8 - Expansion Module	2	02 02			
EEC CRF MF3	40018	Sensore temperatura olio /pressione olio	Segnale di temperatura	01 02	01 02	C.a. o c.c. a Vbatt C.c. a Gnd	Yellow	
EEC CRF MF3	40021	Sensore temperatura olio /pressione olio	Segnale Pressione	01 02	02	C.a. o c.c. a Vbatt C.c. a Gnd	Yellow	
EEC CRF MF3	40017	Sensore temperatura/pressione gas rail valle	Segnale di temperatura	08 01	01		Yellow	
EEC CRF MF3	40025	riduttore (bassa pressione) Sensore temperatura/pressione gas rail valle riduttore (bassa pressione)	Segnale Pressione	02 01 02	01	C.c. a Gnd C.a. o c.c. a Vbatt C.c. a Gnd	Yellow	
EEC CRF MF3	40011	Sensore temperatura/pressione aria	Segnale di temperatura	08 01	08		Yellow	
EEC CRF MF3	40026	collettore Sensore temperatura/pressione gas rail	Pressione troppo bassa	02	02	C.c. a Gnd Segnale sotto soglia min.	Red	
EEC CRF MF3	40024	Sensore temperatura/pressione aria collettore	Segnale di pressione	01 02	01	C.a. o c.c. a Vbatt C.c. a Gnd	Yellow	
EEC CRF MF3	40016	Sensore temperatura acqua		08 01	01	Avaria alimentazione sensore C.a. o c.c. a Vbatt	Yellow	
EEC CRF MF3	40027	Sensore pressione GAS bombola monte		02	01	C.c. a Gnd C.a. o c.c. a Vbatt	Yellow	
FEO ODE MES	40040	riduttore (alta pressione) Sensore temperatura scarico (post-		02 08	08	C.c. a Gnd Avaria alimentazione sensore	Vallani	
EEC CRF MF3	40012 40083	catalizzatore) Sensore Lambda pre-catalizzatore		01 02 02	02	C.a. o c.c. a Vbatt C.c. a Gnd Sband. Magro	Yellow	
EEC ORF MF3	40003	Sensore Lambua pre-catalizzatore		04 08	04	Sband. Ricco Errore generico (5)	reliow	
EEC CRF MF3 EEC CRF MF3	40013 40014	Temperatura catalizzatore (preallarme) Temperatura catalizzatore (allarme)		3	03	Temperatura oltre soglia di preallarme Temperatura oltre soglia di allarme	Yellow Red	
EEC CRF MF3	40015	Temperatura catalizzatore (allarme memorizzato)		8	80	Temperatura oltre soglia di allarme (1)	Yellow	
EEC CRF MF3	40022	Sensore pressione valle compressore (sovralimentazione)		01 02	02	C.a. o c.c. a Vbatt C.c. a Gnd	Yellow	
EEC CRF MF3	40046	Tensione di batteria		08	01	Avaria alimentazione sensore Segnale sopra soglia massima	Yellow	
EEC CRF MF3	40055	Sensore di camma		02 01 02	01	Segnale sotto soglia massima C.a. o c.c. a Vbatt C.c. a Gnd	Yellow	
EEC CRF MF3	40056	Sensore di giri motore		01 02	01	C.a. o c.c. a Vbatt C.c. a Gnd	Red	
EEC CRF MF3	40023	Pressione atmosferica (interno alla ECU)		01 02	01	C.a. o c.c. a Vbatt C.c. a Gnd	Yellow	
EEC CRF MF3 EEC CRF MF3	40044 40043	Relè carichi (comando in c.c. a Vbatt) Relè carichi (comando in c.a.)		1	04	Comando c.c. a Vbatt Comando in c.a.	Red Red	
EEC CRF MF3	40045	Relè carichi (contatto incollato aperto oppure comando in c.a.)		8		Relè incollato aperto oppure comando in c.a.	Red	
EEC CRF MF3	40041 40042	Relè carichi (contatto incollato chiuso) Relè carichi (comando in c.c. a Gnd)		2	02		Yellow	
EEC CRF MF3	40071	Iniettore 1		01 02 03	02	C.c. lato caldo a Vbatt C.c lato caldo a Gnd C.c tra lato caldo e lato freddo	Yellow	
				04 05	04	Circuito aperto C.c lato freddo a Vbatt		
EEC CRF MF3	40072	Iniettore 2		06 01	06	C.c. lato freddo a Gnd C.c. lato caldo a Vbatt	Yellow	
				02 03	02	C.c lato caldo a Gnd C.c tra lato caldo e lato freddo		
				04 05	05	Circuito aperto C.c lato freddo a Vbatt		
EEC CRF MF3	40073	Iniettore 3		06 01	01	C.c lato freddo a Gnd C.c. lato caldo a Vbatt	Yellow	
				02 03 04	02 03 04			
				05 06	05	C.c lato freddo a Vbatt C.c lato freddo a Gnd		
EEC CRF MF3	40074	Iniettore 4		01 02	01	C.c. lato caldo a Vbatt C.c. lato caldo a Gnd	Yellow	
				03 04	03 04	C.c tra lato caldo e lato freddo Circuito aperto		
				05 06		C.c lato freddo a Gnd		
EEC CRF MF3 EEC CRF MF3	40075	Iniettore 5		01	01		Yellow Yellow	
				02 03 04	03	C.c lato caldo a Gnd C.c tra lato caldo e lato freddo Circuito aperto		
				05 06	05	C.c lato freddo a Vbatt C.c lato freddo a Gnd		
EEC CRF MF3	40076	Iniettore 6		01 02	01	C.c. lato caldo a Vbatt C.c lato caldo a Gnd	Yellow	
				03 04	03	C.c tra lato caldo e lato freddo Circuito aperto		
				05 06	05 06	C.c lato freddo a Vbatt C.c lato freddo a Gnd		
EEC CRF MF3	40032	Elettrovalvola CNG su riduttore pressione (comando in c.c. a Vbatt o comando in c.a.)		01 04	01	C.a. o c.c. a Vbatt Circuito aperto	Red	
	40031	Elettrovalvola CNG su riduttore pressione		2	02	C.c. a Gnd	Yellow	
EEC CRF MF3		(comando in c.c. a Gnd) Elettrovalvola CNG su bombole (comando in		01		C.a. o c.c. a Vbatt	Red	
EEC CRF MF3	40036	a a a \/hatt = ' ' '		04 2		Circuito aperto C.c. a Gnd	Yellow	
	40036 40034	c.c. a Vbatt o comando in c.a.) Elettrovalvola CNG su bombole (comando in		_				
EEC CRF MF3				01		C.c. a Vbatt	Yellow	
EEC CRF MF3	40034	Elettrovalvola CNG su bombole (comando in c.c. Gnd)			02 04		Yellow	
EEC CRF MF3 EEC CRF MF3	40034	Elettrovalvola CNG su bombole (comando in c.c. Gnd) Riscaldatore sonda Lambda		01 02 04 01 02 03	02 04 01 02 03	C.c. a Vbatt C.c. a Gnd Circ. aperto C.c. a Vbatt Circ.aperto oppure C.c. a Gnd Surriscaldamento		
EEC CRF MF3 EEC CRF MF3	40034 40082 40061	Elettrovalvola CNG su bombole (comando in c.c. Gnd) Riscaldatore sonda Lambda		01 02 04 01 02 03 08	02 04 01 02 03 08	C.c. a Vbatt C.c. a Gnd Circ. aperto C.c. a Vbatt Circ. aperto oppure C.c. a Gnd Surriscaldamento Errore Generico C.c. a Vbatt		
EEC CRF MF3 EEC CRF MF3 EEC CRF MF3	40034 40082 40061	Elettrovalvola CNG su bombole (comando in c.c. Gnd) Riscaldatore sonda Lambda Bobina di accensione 1		01 02 04 01 02 03 08 01 02	02 04 01 02 03 08 01 02 03	C.c. a Vbatt C.c. a Gnd Circ. aperto C.c. a Vbatt Circ.aperto oppure C.c. a Gnd Surriscaldamento Errore Generico C.c. a Vbatt Circ.aperto oppure C.c. a Gnd Surriscaldamento Errore Generico	Yellow	
EEC CRF MF3 EEC CRF MF3 EEC CRF MF3	40034 40082 40061 40062	Elettrovalvola CNG su bombole (comando in c.c. Gnd) Riscaldatore sonda Lambda Bobina di accensione 1		01 02 04 01 02 03 08 01 02 03 08	02 04 01 02 03 08 01 02 03 08 01	C.c. a Vbatt C.c. a Gnd Circ. aperto C.c. a Vbatt C.c. a Vbatt C.c. a Vbatt Circ.aperto oppure C.c. a Gnd Surriscaldamento Errore Generico C.c. a Vbatt Circ.aperto oppure C.c. a Gnd Surriscaldamento Errore Generico C.c. a Vbatt Circ.aperto oppure C.c. a Gnd	Yellow	
EEC CRF MF3 EEC CRF MF3 EEC CRF MF3 EEC CRF MF3	40034 40082 40061 40062	Elettrovalvola CNG su bombole (comando in c.c. Gnd) Riscaldatore sonda Lambda Bobina di accensione 1 Bobina di accensione 2		01 02 04 01 02 03 08 01 02 03 08	02 04 01 02 03 08 01 02 03 08 01 02 03 08	C.c. a Vbatt C.c. a Gnd Circ. aperto C.c. a Vbatt Circ.aperto oppure C.c. a Gnd Surriscaldamento Errore Generico C.c. a Vbatt Circ.aperto oppure C.c. a Gnd Surriscaldamento Errore Generico Errore Generico	Yellow	

ECU	SPN	Fault Component	Description	FMI	FMI	FMI	Lamp	Comment
Name EEC CRF MF3	[Hex] 40064	Bobina di accensione 4	,	[DEC] 01	(HEX	Description	status Yellow	
				02 03	02	Circ.aperto oppure C.c. a Gnd Surriscaldamento		
EEC CRF MF3	40065	Bobina di accensione 5		08	08	Errore Generico Errore Generico	Yellow	
EEC CRF MF3 EEC CRF MF3	40066 40088	Bobina di accensione 6 Attuatore WASTEGATE		8 01	08	Errore Generico C.c. a Vbatt	Yellow Yellow	
EEC CRF IMF3	40000	Alluatore WASTEGATE		02 04	02	C.c. a Gnd	reliow	
EEC CRF MF3	40000	Lines CAN			04	·	Velleur	
	40099	Linea CAN		04 08	80		Yellow	
EEC CRF MF3	40037	Potenziometro 1 Posizione Farfalla Motorizzata		01 02	02	C.c. a Vbatt C.a. o c.c. a Gnd	Yellow	
EEC CRF MF3	40038	Potenziometro 2 Posizione Farfalla		08 01	01	Avaria alimentazione sensore C.c. a Vbatt	Yellow	
		Motorizzata		02 08		C.a. o c.c. a Gnd Avaria alimentazione sensore		
EEC CRF MF3	40039	Coerenza Potenziometri Posizione Farfalla Motorizzata		8	80	Errore Generico	Yellow	
EEC CRF MF3	40085	Fault Contemporaneo Potenziometri Farfalla Motorizzata		8	80	Errore Generico	Red	
EEC CRF MF3	40028	Driver Farfalla Motorizzata		01 02	01 02		Red	
				03 04	03	Surriscaldamento Circ. aperto		
				05 06	05 06	Surriscaldamento (prewarning)		
EEC CRF MF3	40067	Farfalla Motorizzata - Allarme		08	08		Red	
EEC CRF MF3 EEC CRF MF3	40067	Farfalla Motorizzata - Warning		1	01	Mancato ritorno in Limp Home Errore apprendimento minimo	Yellow	
EEC CRF MF3	40069	Farfalla Motorizzata - PreWarning		1	01	Mancato ritorno in Limp Home	Yellow	
EEC CRF MF3 EEC CRF MF3	40078	Condotto Aspirazione Aria		8 01	01	Errore apprendimento minimo Aria superiore alla stima	Yellow Yellow	
EEC CRF MF3	40079	Funzionalità ECU		02 01	01	Aria inferiore alla stima Errore di tipo M	Red	
				02 04	04	Errore di tipo C Errore di tipo S		
EEC CRF MF3	40053	Riconoscimento Saturazione Autoadattatività		08 01	01	Errore generico Saturazione verso l'alto	Yellow	
EEC CRF MF3	40049	Saturazione Persistente Autoadattatività		02 8		Saturazione verso il basso Errore Generico	Yellow	
EEC CRF MF3	40081	Riscaldatore sonda Lambda Postcatalizzatore		01 02	02	C.c. a Vbatt C.c. a Gnd	Yellow	
EEC CRF MF3	40095	Catalizzatore		04	04	Circ. aperto Errore Generico	Yellow	
EEC CRF MF3 EEC CRF MF3	40093 40094	Sonda Lambda monte catalizzatore Congruenza Lambda montevalle			08	Errore Generico Errore Generico	Yellow Yellow	
EEC CRF MF3 EEC CRF MF3	40096 40097	Ripartizione Fuel System Fuel System magro		8 01	80	Errore ripartizione Guadagno iniett.	Yellow Yellow	
2.3, 0		, . 		02 04		Offset iniett.		
EEC CRF MF3	40098	Fuel System ricco		01 02	01		Yellow	
EEC CRF MF3	40077	Comando Relè Elettroventola		04 01	04	Saturazione C.c. a Vbatt	Yellow	
EEC CRF MF3	40077	Comando Reie Elettroventola Comando Reiè Elettroventola		04	04	C.c. a voatt Circ. aperto C.c. a Gnd	Yellow	
VCM	42701	CC set plus (Digital Input 5)		02	02	02: data erratic, intermittend or incorrect (application (Eltrac)	Yellow	
VCM	42702	CC set minus (Digital Input 6)		03 02 03	02	03: voltage above normal or shorted high 02: data erratic, intermittend or incorrect (application (Eltrac)	Yellow	
VCM	42703	CC resume (Digital Input 7)		02	02	03: voltage above normal or shorted high 02: data erratic, intermittend or incorrect (application (Eltrac)	Yellow	
VCM	42704	CC off (Digital Input 8)		03	02	03: voltage above normal or shorted high 02: data erratic, intermittend or incorrect (application (Eltrac)	Yellow	
VCM	42705	CC internal / external (Digital Input 11)		03 3	03	03: voltage above normal or shorted high 03: voltage above normal or shorted high	Yellow	
VCM	42706	ACC enable (Digital Input 25)			04	03: voltage above normal or shorted high 04: voltage below or normal or shorted low	Yellow	
VCM VCM	42707 42710	economy mode (Digital Input 13) PTO2 (Digital Input 22)		3	03	03: voltage above normal or shorted high 03: voltage above normal or shorted high	Yellow Yellow	
VCM VCM	42711 42714	PTO3 (Digital Input 23) primary brake (Digital Input 1)		3 02	02	03: voltage above normal or shorted high 02: data erratic, intermittend or incorrect (application Eltrac)	Yellow Yellow	
VCM	42715	secondary brake (Digital Input 2)		04 02	02	04: voltage below or normal or shorted low (device driver) 02: data erratic, intermittend or incorrect (application (Eltrac)	Yellow	
VCM	42716	engine brake request (Digital Input 13)		04 3	03	04: voltage below or normal or shorted low (device driver) 03: voltage above normal or shorted high	Yellow	
VCM VCM	42717 42718	engine brake mode 1 (Digital Input 14) engine brake mode 2 (Digital Input 15)		3	03	03: voltage above normal or shorted high 03: voltage above normal or shorted high	Yellow Yellow	
VCM	42719	parking brake (Digital Input 18)			03	02: data erratic, intermittend or incorrect (application (Eltrac) 03: voltage above normal or shorted high	Yellow	
VCM	42720	Fan control pressure switch 18 bar (Digital Input 27)			04		Yellow	
VCM	42721	Fan control pressure switch 22 bar (Digital Input 28)			03 04	04: voltage below or normal or shorted low	Yellow	
VCM	42722	BB Neutral (High Side Output 1)			03 04	04: voltage below or normal or shorted low	Yellow	
VCM	42723	Output Single H Gear 1 / ACC Lamp				05: current below normal or open circuit 03: voltage above normal or shorted high	Yellow	
		(High Side Output 2)			04 05	04: voltage below or normal or shorted low 05: current below normal or open circuit		
VCM	42726	BB Parking Brake (High Side Output 3)			03 04	03: voltage above normal or shorted high 04: voltage below or normal or shorted low	Yellow	
VCM	42727	Output Single H Gear 2 / ACC Buzzer				03: voltage above normal or shorted high	Yellow	
		(High Side Output 4)			04 05			
VCM	42728	BB Service Brake (High Side Output 5)			03 04		Yellow	
VCM	42729	BB Programmable Threshold Speed (High			05 03	05: current below normal or open circuit	Yellow	
		Side Output 6)			04 05	04: voltage below or normal or shorted low 05: current below normal or open circuit		
VCM	42731	Gear high / low request (Digital Input 12)		02 03	02	02: data erratic, intermittend or incorrect (application (Eltrac) 03: voltage above normal or shorted high	Yellow	
VCM	42732	clutch switch (Digital Input 9)		02 03	02	02: data erratic, intermittend or incorrect (application (Eltrac) 03: voltage above normal or shorted high	Yellow	
VCM VCM	42733 42734	neutral switch (Digital Input 16) D - automatic / manual (Digital Input 29)		3	03	03: voltage above normal or shorted high 02: data erratic, intermittend or incorrect (application (Eltrac)	Yellow Yellow	
VCM	42735	R - reverse (Digital Input 30)			03	03: voltage above normal or shorted high 02: data erratic, intermittent or incorrect (application (Eltrac)	Yellow	
VCM	42736	N - neutral shifting (Digital Input 31)			03	03: voltage above normal or shorted high 02: data erratic, intermittend or incorrect (application (Eltrac)	Yellow	
VCM	42737	gear up shift request (Digital Input 32)			03	03: voltage above normal or shorted high 02: data erratic, intermittend or incorrect (application (Eltrac)	Yellow	
VCM	42738	gear down shift request (Digital Input 32)			03		Yellow	
VCM	42738	Dm special manoeuvring (Digital Input 33)			03	U2: data erratic, intermittend or incorrect (application (Eltrac) 03: voltage above normal or shorted high 02: data erratic, intermittend or incorrect (application (Eltrac)	Yellow	
VCM	42739				03		Yellow	
VOIVI	72141	Frequency Input			04	U3: Voltage above normal or snorted nign 04: voltage below or normal or shorted low 0A: abnormal rate of change	, ellow	
VCM	42746	cabin tilted (Digital Input 17)		3	03	03: voltage above normal or shorted high	Yellow	
VCM	42747	engine remote start (Digital Input 19)			03	02: data erratic, intermittend or incorrect (application (Eltrac) 03: voltage above normal or shorted high	Yellow	
VCM	42748	engine remote stop (Digital Input 20)			03	02: data erratic, intermittend or incorrect (application (Eltrac) 03: voltage above normal or shorted high	Yellow	
VCM	42749	crank request (Digital Input 4)		02 04	04	02: data erratic, intermittend or incorrect (application (Eltrac) 04: voltage below or normal or shorted low (device driver)	Yellow	
VCM	42750	Immobilizer LED (Low Side Output 3)			04	03: voltage above normal or shorted high 04: voltage below or normal or shorted low	Yellow	
VCM	42759	EP1 (development)			01	05: current below normal or open circuit 01: data valid but below normal operation range	Yellow	
					03	02: data erratic, intermittent or incorrect 03: voltage below normal or shorted high		
					05			
VCM	42760	Accelerator pedal correlation	Pedal correlation first threshold Pedal correlation second threshold		0D 0E	0D: out of calibration 0E: special instruction	Yellow	
VCM	42764	TSC1 Handling	Most severe level: positive engine brake torque control Most severe level: negative torque control detection		00 01	00: data valid but above normal operation range 01: data valid but below normal operation range	Yellow	
			Speed request over plausible windows Incoherent requests of fuelling and negative torque		0B 0C	0B: Root cause not known 0C: bad intelligent device or component		
VCM	42765	Powertrain and Brake request Evaluation	Moderately severe level: negative torque limit request Active at least one error relative to TSC1_TE (44;50;38;32;20;26;		12	12: Data valid but below normal operational range 0B: Root cause not known	Yellow	
VCM	42766	Powertrain and Brake request Evaluation	Active at least one error relative to TSC1_AE (43; 49; 37; 31; 19; 25;			0B: Root cause not known	Yellow	
VCM	42767	Powertrain and Brake request Evaluation	Active at least one error relative to TSC1_DE (45; 51; 39; 33; 21; 27;			0B: Root cause not known	Yellow	
VCM	42768	Powertrain and Brake request Evaluation	Active at least one error relative to TSC1_PE (ICB) (47; 53; 41; 35; 23;			0B: Root cause not known	Yellow	
VCM	42769		29;17;11;5) Active at least one error relative to TSC1_PE (VDB) (48;54;42;36;24;			0B: Root cause not known	Yellow	
VCM	42770	NORD Error	30 ; 18 ; 12 ; 6) wrong ratio between Vehicle speed and output shaft speed or bad EOL			0D: out of calibration	Yellow	
VCM	42771	NORD Error	parameter bad value inside the limitation MAPS or interpolation error			12: Data valid but below normal operational range	Yellow	
VCM	42772	NORD Error	wrong EOL parameters division by zero due to vehicle speed equal to 0Km/h	2		02: data erratic, intermittend or incorrect	Yellow	
VCM	42773	NORD Error	Software initializing a bad value on output.		0B	0B: Root cause not known	Yellow	

ECU Name	SPN [Hex]	Fault Component	Description	FMI [DEC]	FMI [HEX]	FMI Description	Lamp	Comment
VCM	42774	VIM - Vehicle information module	- filtered MTCO vehicle speed greater than Brake speed of a certain EOL km/h threshold - filtered MTCO vehicle speed lower than Brake speed of a certain EOL		01	00: data valid but above normal operation range 01: data valid but below normal operation range 02: data erratic, intermittend or incorrect	Yellow	
			- intered whice speed lower than blake speed of a certain EOL km/h threshold - Totally missing vehicle speed		0B	0B: Root cause not known 12: Data valid but below normal operational range		
			Missing TCO1 official information, but a recovery speed is available MTCO vehicle speed greater than EOL thr Km/h					
VCM	42775	VIM - Vehicle information module	- Engine speed totally missing - Engine speed missing but replaced		0B	02: data erratic, intermittend or incorrect 0B: Root cause not known	Yellow	
VCM	42776	VIM - Vehicle information module	Engine speed over range Engine temperature totally missing Engine temperature missing but replaced		02	13: received network data in error 02: data erratic, intermittend or incorrect 0B: Root cause not known	Yellow	
VCM	42777	(A)CC Output interface	- Engine temperature over range		13	13: received network data in error 00: data valid but above normal operation range	Yellow	
					11	01: data valid but below normal operation range - most severe level		
VCM	42778	EM interface				Data valid but below normal operating range - least severe level O1: data valid but below normal operation range - most severe	Yellow	
VOIVI	42110	Livi interface			02	level 02: data erratic, intermittend or incorrect	Tellow	
						OC: Bad intelligent device or component 10: Data valid but above normal operational range		
VCM	42779	Low Idle Control Module	Low idle speed setpoint is not within a valid range			Data valid but below normal operating range - least severe level OB: failure mode not identifiable	Yellow	
VCM VCM	42780 42781	Cruise Control Buttons Interface Module Cruise Control Buttons Interface Module			0B 0B	0B: failure mode not identifiable 0B: Root cause not known	Yellow Yellow	
VCM VCM	42782 42783	Power Take Off Module Cruise Control Vehicle Speede Module			0B	OC: Bad intelligent device or component OB: failure mode not identifiable OB: failure mode not identifiable		
VCM	42784	Gear Ratio calculation	ncoherent value of the ratio of engine speed and tachograph output shaft speed			OC: bad intelligent device or component	Yellow	
VCM VCM	42785 42788	Torque limit Driveability	Incoherent value of accelerator pedal and engine speed for MIN-MAX	2	02	02: data erratic, intermittend or incorrect 02: data erratic, intermittend or incorrect	Yellow	
VCM VCM	42789 42790	Engine Brake Management Intarder Brake Management	Incoherent value of engine speed for ALL SPEED TSC1_TER detection TSC1_ADR detection	2 2	02	0E: special instructions 02: data erratic, intermittent, or incorrect 02: data erratic, intermittent, or incorrect		
VCM VCM	42791 42792	Intarder Brake Management Powertrain and Brake request Evaluation	TSC1_CCDR detection One or more of internal error relative to TSC1_EME are active.	2	02	02: data erratic, intermittent, or incorrect 0B: failure mode not identifiable		
VCM VCM VCM		VIM - Vehicle information module Engine Brake Management Engine Brake Management	Brake light activation error. TSC1_TXR detection TSC1_AXR	2	02	02: data erratic, intermittent, or incorrect 02: data erratic, intermittent, or incorrect 02: data erratic, intermittent, or incorrect	Yellow	
VCM VCM	42796	Engine Brake Management Engine Brake Management EU2LeverInterface	TSC1_EMER detection Gear up request stucked	2	02	02: data erratic, intermittent, or incorrect 02: data erratic, intermittent, or incorrect	-	
VCM	42798	EU2LeverInterface	Gear up request timeout Gear down request stucked		02	09: abnormal update rate 02: data erratic, intermittent, or incorrect	Yellow	
VCM VCM	42799 4270A	EU2LeverInterface adjustable speed limiter (Digital Input 10)	Gear down request timeout Neutral request stucked	2	02	09: abnormal update rate 02: data erratic, intermittent, or incorrect 03: voltage above normal or shorted high	Yellow Yellow Yellow	
VCM	4270B	secondary speed limiter (Digital Input 3)		02 04	02	02: data erratic, intermittend or incorrect (application (Eltrac) 04: voltage below or normal or shorted low (device driver)	Yellow	
VCM VCM	4270F 4271A	PTO1 (Digital Input 21) engine brake mode (Digital Input 14)		3	03	03: voltage above normal or shorted high 03: voltage above normal or shorted high	Yellow Yellow	
VCM	4272A	BB Clutch Pedal (Low Side Output 2)			04	03: voltage above normal or shorted high 04: voltage below or normal or shorted low 05: current below normal or open circuit	Yellow	
VCM	4273A	Rm special manoeuvring (Digital Input 35)			02	02: data erratic, intermittend or incorrect (application (Eltrac) 03: voltage above normal or shorted high	Yellow	
VCM	4273B	Clutch switch 2 (Digital Input 26)			03	02: data erratic, intermittend or incorrect (application (Eltrac) 03: voltage above normal or shorted high	Yellow	
VCM	4273C	Low Idle (Digital Input 24)	Short 5V Short 24V		02	04: voltage below or normal or shorted low 02: data erratic, intermittend or incorrect 03: voltage above normal or shorted high	Yellow Yellow	
			Short low Switch does not switches		04 05	04: voltage below or normal or shorted low 05: current below normal or open circuit	Yellow Yellow	
VCM	4273D	accelerator pedal (Analog Input 1)	Switching point outside specification Switching point valid but slight outside specification Analog value valid but slight too high			08: abnormal frequency, pulse width or period 0D: out of calibration 00: data valid but above normal operation range	Yellow 	
VOIVI	42730	accelerator pedar (Arraiog Input 1)	Analog value valid but slight too low Analog value too high		01	01: data valid but above normal operation range 02: data erratic, intermittend or incorrect	 Yellow	
			Short 24V Short low		04	03: voltage above normal or shorted high 04: voltage below or normal or shorted low	Yellow Yellow	
VCM	4273E	Acc. Pedal Power Supply (5 V supply)	Short 5V Analog value too low		0E	0D: out of calibration 0E: special instructions 02: data erratic, intermittend or incorrect	Yellow Yellow Yellow	
VCM		crank relay (High Side Output 7)			04	04: voltage below or normal or shorted low 03: voltage above normal or shorted high	Yellow	
VCM	4074D	and a star (Law Cids Outs 44)			05	04: voltage below or normal or shorted low 05: current below normal or open circuit	Vallani	
VCIVI	4274B	crank relay (Low Side Output 1)	External crank relay activation		04	03: voltage above normal or shorted high 04: voltage below or normal or shorted low 05: current below normal or open circuit	Yellow Yellow Yellow	
VCM	4275A	ACC Sensor 1	Sensor comunication error		06 0B	06: current above normal or grounded circuit 0B: failure mode not identifiable	Red Yellow	
VCM	4275B	ACC distance selector input (Analog Input 2)	Sensor continuosly not available Sensor temperature not available		0D	OC: bad intelligent device or component OD: out of calibration O3: voltage above normal or shorted high	Yellow	
VCM		1 \ 0 1 /	Supply out of range		04	04: voltage below or normal or shorted low 02: data erratic, intermittend or incorrect	Yellow	
VCM	4275D	supply) ACC Parameter	Supply short high Supply short low Flash parameter not correct		04	03: voltage above normal or shorted high 04: voltage below or normal or shorted low 0D: out of calibration		
VCM VCM		ACC Sensor 2	Sensor dirty		0E	DE: special instructions OC: analog value valid but slight too high	Yellow Yellow	
			Analog value valid but slight too low Analog value too high		01 02	01: analog value valid but slight too low 02: analog value too high	Yellow	
			Short 24V Short low Short 5V		04	03: short 24V 04: short low 0D: short 5V	Yellow Yellow Yellow	
VCM	4276A	Powertrain and Brake request Evaluation	Analog value too low Active at least one error relative to TSC1 _ CCE (46; 52; 40; 34; 22; 28	l l	0E	OE: analog value too low OB: Root cause not known	Yellow	
VCM		NORD Error	; 16 ; 10 ; 4) wrong link between Current gear and gear number rangex (x=15)			13: received network data in error	Yellow	
VCM VCM VCM	4277A 4277B 4277C	High Idle Control Module Intermediate Speed Control Module Cruise Control Buttons Interface Module	High idle speed setpoint is not within a valid range Itermediate speed control setpoint/limit is not within a valid range	2	0B	OB: failure mode not identifiable OB: failure mode not identifiable O2: data erratic, intermittend or incorrect	Yellow	
VCM	4277D	Cruise Control Buttons Interface Module			02 0B	02: data erratic, intermittend or incorrect 0B: Root cause not known	Yellow Yellow	
VCM VCM	4277E 4277F	Cruise Control Buttons Interface Module Cruise Control Buttons Interface Module		2 2	02	OC: Bad intelligent device or component O2: data erratic, intermittend or incorrect O2: data erratic, intermittend or incorrect	Yellow	
VCM VCM	4278A 4278B	Engine Brake Management Engine Brake Management	TSC1_AER detection TSC1_DER detection	2	02 02	02: data erratic, intermittent, or incorrect 02: data erratic, intermittent, or incorrect	. 55**	
VCM VCM VCM		Engine Brake Management Engine Brake Management Engine Brake Management	TSC1_PER on VDB detection TSC1_PER on ICB detection TSC1_PER on ICB detection TSC1_CCER detection	2 2 2	02	02: data erratic, intermittent, or incorrect 02: data erratic, intermittent, or incorrect 02: data erratic, intermittent, or incorrect		
VCM VCM	4278F	Engine Brake Management Engine Brake Management EU2LeverInterface	When VCM receives TSC1_PER both on ICB and VDB Drive Forward / Drive Forward manoeuvring:	2	02 02	02: data erratic, intermittent, or incorrect 02: data erratic, intermittent, or incorrect	Yellow	
1/21	10-11	Elia mad i C	Button stucked Button not plausible		0C	0C: bad intelligent device or component		
VCM	4279B	EU2LeverInterface	Drive Reverse / Drive Reverse manoeuvring: Button stucked Button not plausible			02: data erratic, intermittent, or incorrect 0C: bad intelligent device or component	Yellow	
VCM VCM	4279C 4279D	Service Brake Eval Driver Intarder Brake	Primary brake sw/secondary brake sw not plausible Intarder brake lever not plausible		0C	OC: bad intelligent device or component OC: bad intelligent device or component	Red Yellow	
VCM VCM VCM	4279F	Engine Fan Driver Engine Brake	switch 18 and 22 not plausible Plausibility check on the Engine brake lever Transponder programming not possible		0C	OC: bad intelligent device or component OC: bad intelligent device or component O2: data erratic, intermittend or incorrect	Yellow Yellow Yellow	
VOIVI	÷∠1 D4	Immobilizer1	Transponder programming not possible Transponder programming not possible Different pin source within keyset		0B	O2: data erratic, intermittend or incorrect OB: failure mode not identifiable OC: bad intelligent device or component	I CIIOW	
			IDE has been read twice or is equal 0 Max number of keys exceeded		0D 0E	0D: out of calibration 0E: special instructions		
VCM	427B5 427B6	Immobilizer2 Immobilizer3	Ignition not switched off in time Unknown IDE No communication to ECM		0B	02: data erratic, intermittend or incorrect 0B: failure mode not identifiable 0C: bad intelligent device or component	Yellow	
			Unknown ECM No immobilizer function in ECM		0D 0E	0D: out of calibration 0E: special instructions	I GIIOW	
VCM		Immobilizer4	VCM in plant mode ECM in plant mode and learning already completed		02 0B	02: data erratic, intermittend or incorrect 0B: failure mode not identifiable	Yellow	
VCM VCM	427B8 427B9	Immobilizer in plant mode Immobilizer5	VCM in plant mode and key learning active Bit error in transponder response Antenna hardware error	2	02	02: data erratic, intermittend or incorrect 02: data erratic, intermittend or incorrect 07: mechanicial system not responding properly	Yellow	
			Internal operation error No transponder response		0B 0C	0B: failure mode not identifiable 0C: bad intelligent device or component		
VCM VCM VCM	427BB	auxiliary use 1 auxiliary use 2 auxiliary use 3		2 2	02	02: data erratic, intermittend or incorrect 02: data erratic, intermittend or incorrect 02: data erratic, intermittend or incorrect	Yellow Yellow Yellow	
VCM VCM VCM	427BD	auxiliary use 3 auxiliary use 4 auxiliary use 5		2 2	02	02: data erratic, intermittend or incorrect 02: data erratic, intermittend or incorrect 02: data erratic, intermittend or incorrect	Red Red	
VCM	427C0	Vehicle Data Bus (instrument cluster)	not supported: ServiceInfo Timeout (VDB) ACC2 timeout (VDB)		01 02	01: data valid but below normal operation range 02: data erratic, intermittend or incorrect	Yellow 	
VCM	427C8	Vehicle Data Bus	DM1_IC timeout (VDB) IC2BC timeout (VDB) VDB limitation		04	03: voltage above normal or shorted high 04: voltage below or normal or shorted low 0B: abnormal rate of change		
V CIVI	72100	- SHIOL Data Dus	VDB imitation VDB bus off			13: received network data in error	Yellow	

Print Date: 8/11/2011

Column			T				T.		
Column	ECU Name	SPN [Hex]	Fault Component	Description	FMI [DEC]	FMI [HEX]	FMI Description	Lamp status	Comment
Column	VCM		Vehicle Data Bus (brake controller)						
The content of the				TSC1_AE timeout		03	03: Abnormal update rate	Yellow	
Company				TSC1_ADR timeout		05	05: Abnormal update rate		
Column C				VDC1 timeout		07	07: Abnormal update rate		
Column									
Column									
The content of the	VCM	427CA	Vehicle Data Bus (transmission controller)	TSC1_AXR timeout		0C	0C: Abnormal update rate		
Company Comp	VOIVI	427071	Veriloie Bata Bas (transmission controller)	ETC2 timeout (VDB)		02	02: Abnormal update rate	Yellow	
1.				TSC1_TER timeout (VDB)		04	04: Abnormal update rate		
Column				TSC1_TXR timeout (VDB)		06	06: Abnormal update rate		
10 10 10 10 10 10 10 10									
1985 1986				TC_BC timeout (VDB)		09	09: Abnormal update rate		
Column C	VCM	427CB	Vehicle Data Bus (body controller)	not supported: AIR1 timeout (VDB)		01	01: Abnormal update rate		
Company				TSC1_PERV timeout (VDB)		03	03: Abnormal update rate		
## 1997 1997									
Column C									
Column C				BCAO1 timeout (VDB)		80	08: Abnormal update rate	Yellow	
The content of the				BCAO3 timeout (VDB)		0B	0B: abnormal update rate		
Column				not supported: Other Body controller timeout (VDB)		13	13: abnormal update rate		
Column C	VCM	427CC	Vehicle Data Bus (driveline retarder)						
1905 1975				TSC1_DER timeout (VDB)		03	03: Abnormal update rate		
1970 1970	VCM	427CD	Vehicle Data Bus (tachograph)	TCO1 timeout (VDB)		01	01: Abnormal update rate		
100 100				Time Date timeout (VDB)		03	03: Abnormal update rate		
1995 1975			,	DM1_ACCSens timeout (VDB)		02	02: Abnormal update rate		
Description	VCM	427CF	Vehicle Data Bus (expansion module)	EM2VCM timeout (VDB)		01	01: Abnormal update rate		
March Marc				EM_CMD timeout (VDB)		03	03: Abnormal update rate		
Column C				TSC1_PER timeout (VDB)		05	05: Abnormal update rate		
CODE				EM2BC timeout (VDB)		07	07: Abnormal update rate		
March Marc							·	Yellow	
The content of the	VCM	427D1	Vehicle Data Bus (suspension)						
March Marc				not supported: ASC4_A timeout (VDB)		80	08: Abnormal update rate		
Column	VCM	427D2	Engine Control Bus	ECB bus off		13	13: received network data in error	Yellow	
Column C	VCM	427D3	Engine Control Bus (engine)	EEC1 timeout (ECB)		01	01: Abnormal update rate		
Mark				EEC3 timeout (ECB)		03	03: Abnormal update rate		
Column C									
Project Proj				INLET_COND timeout (ECB)					
Part				Eng_Fld_Lev_Press timeout (ECB)		80	08: Abnormal update rate		
Section Comparison Compar				Shutdown timeout (ECB)		0A	0A: abnormal update rate		
Vol. 1071				Fuel_Cons timeout (ECB)					
Column				not supported: Eng_Hours_Rev timeout (ECB) BAM_Eng_Conf / MPM_Eng_Conf timeout (ECB)					
Management Man	VCM	427D4	Engine Control Rus (engine retarder)	FAN_Drive timeout (ECB)		0F	0F: Abnormal update rate		
Column C			, ,	ERC1_ER timeout (ECB)		02	02: Abnormal update rate		
Column C			controller - UDS)						
The State of State				ICB limitation		0A	0A: abnormal rate of change		
Part Comment	VCM	42700	Instrument Cluster Bus (body computer)	BC_Status2 timeout (ICB)		02	02: Abnormal update rate	Yellow 	
Part									
1.5 1.5				BCZIC timeout (ICB)		05	05: Abnormal update rate		
Column C				FF_Status1 timeout (ICB)		07	07: Abnormal update rate		
VOID 470° With month Could be to declared in reliable to the country				TCO1 timeout (ICB)		09	09: Abnormal update rate		
Vol.			interface)	not supported: SWI2IC timeout (ICB)		02	02: Abnormal update rate		
March Company Compan	VCM	427DF	Instrument Cluster Bus (expansion module)	not supported: TC1_EM timeout (ICB)				Yellow 	
March Marc									
VAM VCZ Protectioned Closer Exp (rest amend closer) VCM VCZ Protectioned Closer Exp (rest amend closer) VCM VCZ VC				not supported: TSC1_PE timeout (ICB)		03	03: Abnormal update rate		
VOX				not supported: TSC1_PER timeout (ICB)		03 04 05	03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate		
VCM				not supported: TSC1_PER timeout (ICB) not supported: EM2BC timeout (ICB) not supported: CTL timeout (ICB)		03 04 05 06 07	03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate	 	
VCM	VCM	427E2	Instrument Cluster Bus (instrument cluster)	not supported: TSC1_PER timeout (ICB) not supported: EMZBC timeout (ICB) not supported: CTL timeout (ICB) not supported: ASC2 timeout (ICB) IC2BC timeout (ICB)		03 04 05 06 07 08	03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 01: Abnormal update rate 01: Abnormal update rate	 	
Page				not supported: TSC1_PER timeout (ICB) not supported: EMZBC timeout (ICB) not supported: CTL timeout (ICB) not supported: ASC2 timeout (ICB) ICZBC timeout (ICB) ACC2 timeout (ICB) ACC_SI timeout (ICB)		03 04 05 06 07 08 01 02	03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 08: Abnormal update rate 01: Abnormal update rate 02: Abnormal update rate 02: Abnormal update rate 01: Abnormal update rate	 	
FECH time of FMS) FELOX intervoid FMS) FELOX interv	VCM	427E3	Instrument Cluster Bus (ACC sensor)	not supported: TSC1_PER timeout (ICB) not supported: EMZBC timeout (ICB) not supported: CTL timeout (ICB) not supported: ASC2 timeout (ICB) IC2BC timeout (ICB) ACC2 timeout (ICB) ACC2 St timeout (ICB) DM1_ACCSens timeout (ICB) FMS bus off		03 04 05 06 07 08 01 02 01 02	03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 08: Abnormal update rate 01: Abnormal update rate 02: Abnormal update rate 02: Abnormal update rate 02: Abnormal update rate 03: received network data in error	 Yellow	
F.E.D. the self-PROS	VCM	427E3 427E6	Instrument Cluster Bus (ACC sensor) FMS Bus	not supported: TSC1_PER timeout (ICB) not supported: EM/2BC timeout (ICB) not supported: CTL timeout (ICB) not supported: ASC2 timeout (ICB) IC2BC timeout (ICB) ACC2 timeout (ICB) ACC_SI timeout (ICB) DM1_ACCSens timeout (ICB) FMS bus off FMS limitation FLEX0 time out (FMS)		03 04 05 06 07 08 01 02 01 02 13 0A	03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 01: Abnormal update rate 01: Abnormal update rate 02: Abnormal update rate 02: Abnormal update rate 02: Abnormal update rate 13: received network data in error 0A: abnormal rate of change 01: Abnormal update rate	Yellow	
FLCK Sime out (FMS) FLCK S	VCM	427E3 427E6	Instrument Cluster Bus (ACC sensor) FMS Bus	not supported: TSC1_PER timeout (ICB) not supported: EMZBC timeout (ICB) not supported: CTL timeout (ICB) not supported: ASC2 timeout (ICB) IC2BC timeout (ICB) ACC2 timeout (ICB) ACC2 St timeout (ICB) DM1_ACCSens timeout (ICB) FMS bus off FMS limitation FLEX1 time out (FMS) FLEX1 time out (FMS)		03 04 05 06 07 08 01 02 01 02 13 0A 01 02	03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 01: Abnormal update rate 02: Abnormal update rate 02: Abnormal update rate 02: Abnormal update rate 13: received network data in error 0A: abnormal rate of change 01: Abnormal update rate 02: Abnormal update rate	Yellow	
PLEAT Price out (PLS) Control (PLS) Cont	VCM	427E3 427E6	Instrument Cluster Bus (ACC sensor) FMS Bus	not supported: TSC1_PER timeout (ICB) not supported: EMZBC timeout (ICB) not supported: CTL timeout (ICB) not supported: ASC2 timeout (ICB) not supported: ASC2 timeout (ICB) IC2BC timeout (ICB) ACC_SI timeout (ICB) ACC_SI timeout (ICB) DM1_ACCSens timeout (ICB) FMS bus off FMS limitation FLEX0 time out (FMS) FLEX1 time out (FMS) FLEX2 time out (FMS) FLEX2 time out (FMS) FLEX3 time out (FMS) FLEX3 time out (FMS)		03 04 05 06 07 08 01 02 01 02 13 0A 01 02 03 04	03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 01: Abnormal update rate 02: Abnormal update rate 02: Abnormal update rate 02: Abnormal update rate 02: Abnormal update rate 03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 09: Abnormal update rate 09: Abnormal update rate 09: Abnormal update rate	Yellow	
VCM 427F Power Supply May 15 Key 15 strained in sendow Velow	VCM	427E3 427E6	Instrument Cluster Bus (ACC sensor) FMS Bus	not supported: TSC1_PER timeout (ICB) not supported: EMJBC timeout (ICB) not supported: CTL timeout (ICB) not supported: CTL timeout (ICB) not supported: ASC2 timeout (ICB) IC2BC timeout (ICB) ACC2 timeout (ICB) ACC_SI timeout (ICB) DM1_ACCSens timeout (ICB) FMS bus off FMS limitation FLEX0 time out (FMS) FLEX1 time out (FMS) FLEX2 time out (FMS) FLEX2 time out (FMS) FLEX4 time out (FMS) FLEX5 time out (FMS) FLEX5 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS)		03 04 05 06 07 08 01 02 01 02 13 0A 01 02 03 04 05 06	03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 01: Abnormal update rate 02: Abnormal update rate 03: Abnormal rate of change 01: Abnormal update rate 02: Abnormal update rate 03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate	Yellow	
VCM	VCM	427E3 427E6	Instrument Cluster Bus (ACC sensor) FMS Bus	not supported: TSC1_PER timeout (ICB) not supported: EMZBC timeout (ICB) not supported: CTL timeout (ICB) not supported: ASC2 timeout (ICB) IC2BC timeout (ICB) ACC2 timeout (ICB) ACC_SI timeout (ICB) DM1_ACCSens timeout (ICB) FMS bus off FMS limitation FLEX0 time out (FMS) FLEX1 time out (FMS) FLEX2 time out (FMS) FLEX3 time out (FMS) FLEX4 time out (FMS) FLEX5 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS)		03 04 05 06 07 08 01 02 01 02 13 0A 01 02 03 04 05 06 07 08	03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 09: Abnormal update rate	Yellow	
VCM 4277F Power Supply Key 30 Section Power Supply K	VCM VCM VCM	427E3 427E6 427E7	Instrument Cluster Bus (ACC sensor) FMS Bus FMS Bus (EP1)	not supported: TSC1_PER timeout (ICB) not supported: EMZBC timeout (ICB) not supported: CTL timeout (ICB) not supported: ASC2 timeout (ICB) IC2BC timeout (ICB) IC2BC timeout (ICB) ACC2 timeout (ICB) ACC_SI timeout (ICB) DM1_ACCSens timeout (ICB) FMS bus off FMS limitation FLEX0 time out (FMS) FLEX1 time out (FMS) FLEX2 time out (FMS) FLEX2 time out (FMS) FLEX4 time out (FMS) FLEX4 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEXT time out (FMS) FLEX1 time out (FMS)		03 04 05 06 07 08 01 02 01 02 13 0A 01 02 03 04 05 06 07 08	03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 01: Abnormal update rate 02: Abnormal update rate 02: Abnormal update rate 02: Abnormal update rate 03: Received network data in error 04: abnormal rate of change 01: Abnormal update rate 02: Abnormal update rate 03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 09: Abnormal update rate 09: Abnormal update rate 09: Abnormal update rate	Yellow Yellow	
VCM 427F2 Internal Failure (Runcontrol) Learnal (Lounding) VCM 427F3 Internal Failure (Runcontrol) VCM 427F3 Internal Failure (Runcontrol) VCM 427F4 Internal Failure (Runcontrol) VCM 427F6 Internal Failure (Runcontrol) VCM 427F0 Interna	VCM VCM VCM	427E3 427E6 427E7	Instrument Cluster Bus (ACC sensor) FMS Bus FMS Bus (EP1)	not supported: TSC1_PER timeout (ICB) not supported: EMZBC timeout (ICB) not supported: CTL timeout (ICB) not supported: ASC2 timeout (ICB) IC2BC timeout (ICB) ACC2 timeout (ICB) ACC2 St timeout (ICB) DM1_ACCSens timeout (ICB) FMS bus off FMS limitation FLEX0 time out (FMS) FLEX1 time out (FMS) FLEX2 time out (FMS) FLEX2 time out (FMS) FLEX3 time out (FMS) FLEX4 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX8 time out (FMS) FLEX8 time out (FMS) FLEX9 time out (FMS) FLEX1 time out (FMS) XFLEX0 time out (FMS) XFLEX1 time out (FMS) XFLEX1 time out (FMS) Key 15 transition resistence		03 04 05 06 07 08 01 02 01 02 13 0A 01 02 03 04 05 06 07 08 09 09 00 00 00 00 00 00 00 00 00 00 00	03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 09: Abnormal update rate	Yellow Yellow	
Memory M	VCM VCM VCM	427E3 427E6 427E7 427F0	Instrument Cluster Bus (ACC sensor) FMS Bus FMS Bus (EP1) Power Supply Key 15	not supported: TSC1_PER timeout (ICB) not supported: EMZBC timeout (ICB) not supported: CTL timeout (ICB) not supported: ASC2 timeout (ICB) ICZBC timeout (ICB) ACC2 timeout (ICB) ACC_SI timeout (ICB) MI_ACCSens timeout (ICB) FMS bus off FMS limitation FLEX0 time out (FMS) FLEX1 time out (FMS) FLEX2 time out (FMS) FLEX3 time out (FMS) FLEX3 time out (FMS) FLEX5 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX1 time out (FMS) FLEX3 time out (FMS) FLEX5 tim		03 04 05 06 07 08 01 02 01 02 13 0A 01 02 03 04 05 06 07 08 09 04	03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 01: Abnormal update rate 01: Abnormal update rate 02: Abnormal update rate 02: Abnormal update rate 02: Abnormal update rate 03: Rosenal update rate 04: Abnormal update rate 05: Abnormal rate of change 01: Abnormal update rate 02: Abnormal update rate 03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 09: Abnormal update rate 00: Abnormal update rate	Yellow Yellow	
VCM 427F2 Internal Faiture 5 (RL colosupatible) CAN Lockuptable verified 2 2 22 data erraits: intermitted of incorrect Verifiew	VCM VCM VCM	427E3 427E6 427E7 427F0 427F1	Instrument Cluster Bus (ACC sensor) FMS Bus FMS Bus (EP1) Power Supply Key 15 Power Supply Key 30	not supported: TSC1_PER timeout (ICB) not supported: EMZBC timeout (ICB) not supported: CTL timeout (ICB) not supported: ASC2 timeout (ICB) ICZBC timeout (ICB) ACC2 timeout (ICB) ACC_SI timeout (ICB) ACC_SI timeout (ICB) DM1_ACCSens timeout (ICB) FMS bus off FMS limitation FLEX0 time out (FMS) FLEX1 time out (FMS) FLEX1 time out (FMS) FLEX2 time out (FMS) FLEX3 time out (FMS) FLEX5 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEXT time out (FMS) KFLEX1 time out (FMS) KFLEX1 time out (FMS) XFLEX1 time out (FMS)		03 04 05 06 07 08 01 02 01 02 01 02 03 04 05 06 07 08 09 07 08 09 00 07 00 00 00 00 00 00 00 00 00 00 00	03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 09: Abnormal update rate 01: Abnormal update rate 01: Abnormal update rate 02: Abnormal update rate 02: Abnormal update rate 02: Abnormal update rate 03: received network data in error 04: abnormal rate of change 01: Abnormal update rate 02: Abnormal update rate 03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 09: Abnormal update rate 09: Abnormal update rate 00: O3: voltage above normal or shorted high 04: voltage below or normal operation range	Yellow Yellow Yellow	
VCM 427Fb Internal Failure 2 (PCE Voerlooad) CPU overlooad 2 02 02 data erads, intermittend or incorrect Net	VCM VCM VCM	427E3 427E6 427E7 427F0 427F1	Instrument Cluster Bus (ACC sensor) FMS Bus FMS Bus (EP1) Power Supply Key 15 Power Supply Key 30	not supported: TSC1_PER timeout (ICB) not supported: EMZBC timeout (ICB) not supported: CTL timeout (ICB) not supported: ASC2 timeout (ICB) IC2BC timeout (ICB) ACC2 timeout (ICB) ACC2 St timeout (ICB) DM1_ACCSens timeout (ICB) FMS bus off FMS limitation FLEX0 time out (FMS) FLEX1 time out (FMS) FLEX2 time out (FMS) FLEX2 time out (FMS) FLEX3 time out (FMS) FLEX4 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX8 time out (FMS) FLEX8 time out (FMS) FLEX1 time out (FMS) FLEX2 time out (FMS) FLEX3 time out (FMS) FLEX4 time out (FMS) FLEX5 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX7 t		03 04 05 06 07 08 01 02 01 02 01 02 03 04 05 06 07 08 09 00 04 00 01 02	03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 09: Abnormal update r	Yellow Yellow Yellow	
VCM	VCM VCM VCM VCM VCM VCM	427E3 427E6 427E7 427F0 427F1 427F2	Instrument Cluster Bus (ACC sensor) FMS Bus FMS Bus (EP1) Power Supply Key 15 Power Supply Key 30 Internal Failure 1 (Runcontrol) Internal Failure 6 (Rx Lookuptable)	not supported: TSC1_PER timeout (ICB) not supported: EM2BC timeout (ICB) not supported: CTL timeout (ICB) not supported: ASC2 timeout (ICB) IC2BC timeout (ICB) IC2BC timeout (ICB) ACC2_St timeout (ICB) ACC3_St timeout (ICB) DM1_ACCSens timeout (ICB) FMS bus off FMS limitation FLEX0 time out (FMS) FLEX1 time out (FMS) FLEX1 time out (FMS) FLEX2 time out (FMS) FLEX2 time out (FMS) FLEX5 time out (FMS) FLEX5 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX0 time out (FMS) FLEX1 time out (FMS) FLEX1 time out (FMS) FLEX0 time out (FMS) FLEX1 time out (FMS) FLEX2 time out (FMS) FLEX3 time out (FMS) FLEX4 time out (FMS) FLEX5 time out (FMS) FLEX5 time out (FMS) FLEX6		03 04 05 06 07 08 01 02 13 0A 01 02 13 0A 01 02 03 04 05 06 07 08 09 09 00 00 00 00 00 00 00 00	03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 01: Abnormal update rate 02: Abnormal update rate 02: Abnormal update rate 02: Abnormal update rate 03: Rosermal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 09: Abnormal update rate 00: Abnormal update rate 00: Abnormal update rate 01: Abnormal update rate 02: Abnormal update rate 03: Voltage above normal or shorted high 04: voltage below or normal or shorted how 00: data valid but above normal operation range 01: data valid but below normal operation range 01: data valid but below normal operation range 01: special instructions 00: out of calibration	Yellow Yellow Yellow Yellow Red	
Checksum environment data Checksum minmobilizer range Chec	VCM VCM VCM VCM VCM VCM VCM	427E3 427E6 427E7 427E7 427F0 427F1 427F2 427F3 427F4	Instrument Cluster Bus (ACC sensor) FMS Bus FMS Bus (EP1) Power Supply Key 15 Power Supply Key 30 Internal Failure 1 (Runcontrol) Internal Failure 6 (Rx Lookuptable) Internal Failure 7 (CPU overlooad)	not supported: TSC1_PER timeout (ICB) not supported: EMZBC timeout (ICB) not supported: CTL timeout (ICB) not supported: ASC2 timeout (ICB) IC2BC timeout (ICB) ACC2 timeout (ICB) ACC2 St timeout (ICB) DM1_ACCSens timeout (ICB) FMS bus off FMS limitation FLEX0 time out (FMS) FLEX1 time out (FMS) FLEX2 time out (FMS) FLEX2 time out (FMS) FLEX3 time out (FMS) FLEX4 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX8 time out (FMS) FLEX8 time out (FMS) FLEX7 time out (FMS) FLEX8 time out (FMS) FLEX9 time out (FMS) FLEX1 time out (FMS) XFLEX1 time out (FMS) XFLEX1 time out (FMS) XFLEX1 time out (FMS) EXFLEX1 ti	2	03 04 05 06 07 08 01 02 13 0A 01 02 13 0A 05 06 07 08 09 09 00 00 00 00 00 00 00 00	03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 09: data erratic, intermittend or incorrect 03: voltage above normal or shorted high 04: voltage below or normal or shorted how 00: data valid but above normal operation range 01: data valid but below normal operation range 01: data valid but device or component 00: out of calibration 00: special instructions 00: out of calibration 00: date valid instructions 00: date valid instructions	Yellow Yellow Yellow Yellow Red Red Yellow	
Checksum production data Checksum production d	VCM VCM VCM VCM VCM VCM VCM VCM VCM	427E3 427E6 427E7 427F0 427F1 427F2 427F3 427F4 427FB	Instrument Cluster Bus (ACC sensor) FMS Bus FMS Bus (EP1) Power Supply Key 15 Power Supply Key 30 Internal Failure 1 (Runcontrol) Internal Failure 6 (Rx Lookuptable) Internal Failure 7 (CPU overlooad) Internal Failure 3 (RAM / ROM)	not supported: TSC1_PER timeout (ICB) not supported: EM2BC timeout (ICB) not supported: CTL timeout (ICB) not supported: ASC2 timeout (ICB) IC2BC timeout (ICB) ACC2 timeout (ICB) ACC2 St timeout (ICB) DM1_ACCSens timeout (ICB) FMS bus off FMS limitation FLEX0 time out (FMS) FLEX1 time out (FMS) FLEX1 time out (FMS) FLEX2 time out (FMS) FLEX2 time out (FMS) FLEX4 time out (FMS) FLEX5 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX0 time out (FMS) FLEX1 time out (FMS) FLEX2 time out (FMS) FLEX3 time out (FMS) FLEX4 time out (FMS) FLEX5 time out (FMS) FLEX6 t	2	03 04 05 06 07 08 01 02 13 0A 01 02 13 0A 01 02 03 04 05 06 07 08 09 00 00 00 00 00 00 00 00 00	03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 01: Abnormal update rate 01: Abnormal update rate 02: Abnormal update rate 02: Abnormal update rate 02: Abnormal update rate 03: received network data in error 04: abnormal rate of change 01: Abnormal update rate 02: Abnormal update rate 03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 09: Abnormal update rate 09: Abnormal update rate 09: Abnormal update rate 09: Abnormal update rate 00: Abno	Yellow Yellow Yellow Yellow Red Red Yellow Red	
VCM 427FE Internal Failure 4 (Controller) Parameter version wrong Operating system failure 9 (Controller 9 (Cont	VCM VCM VCM VCM VCM VCM VCM VCM VCM	427E3 427E6 427E7 427F0 427F1 427F2 427F3 427F4 427FB	Instrument Cluster Bus (ACC sensor) FMS Bus FMS Bus (EP1) Power Supply Key 15 Power Supply Key 30 Internal Failure 1 (Runcontrol) Internal Failure 6 (Rx Lookuptable) Internal Failure 7 (CPU overlooad) Internal Failure 3 (RAM / ROM)	not supported: TSC1_PER timeout (ICB) not supported: EMZBC timeout (ICB) not supported: CTL timeout (ICB) not supported: ASC2 timeout (ICB) IC2BC timeout (ICB) ACC2 timeout (ICB) ACC_SI timeout (ICB) ACC_SI timeout (ICB) MI_ACCSens timeout (ICB) FMS bus off FMS limitation FLEX0 time out (FMS) FLEX1 time out (FMS) FLEX1 time out (FMS) FLEX2 time out (FMS) FLEX3 time out (FMS) FLEX5 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX8 time out (FMS) FLEX9 time out (FMS) FLEX1 time out (FMS) XFLEX1 time out (FMS) XFLEX2 time out (FMS) XFLEX3 time out (FMS) XFLEX4 time out (FMS) XFLEX4 time out (FMS) XFLEX5 time out (FMS) XFLEX6 time out (FMS) XFLEX6 time out (FMS) XFLEX1 time out (FMS) XFLEX1 time out (FMS) XFLEX1 time out (FMS) XFLEX1 time out (FMS) XFLEX3 time out (FMS) XFLEX4 time out (FMS) XFLEX5 time out (FMS) XFLEX5 time out (FMS) XFLEX6	2	03 04 05 06 07 08 01 02 13 0A 01 02 13 0A 01 02 03 04 05 06 07 08 09 00 00 00 00 00 00 00 00 00	03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 09: Abnormal update rate 01: Abnormal update rate 01: Abnormal update rate 02: Abnormal update rate 02: Abnormal update rate 02: Abnormal update rate 03: received network data in error 04: abnormal rate of change 01: Abnormal update rate 02: Abnormal update rate 03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 09: Abnormal update rate 09: Abnormal update rate 00: Observation update rate 00: Abnormal update rate 00: Abnormal update rate 00: Observation update rate 00:	Yellow Yellow Yellow Yellow Red Red Yellow Red	
Operating system failure Software trap Controller failure VCM 427FF Internal Failure 5 (Bootloader) Flash parameter failure Flash program failure S. C. to Vat detected in Off condition - S. C. to Vat detected in Off condition - Open Load detected in Off condition - Open Load detected in Off condition - S. C. to Condition (Suit active below 20u4-2mA) Open Circuit and Short to Broudino (Fault active below 20u4-2mA) Open Circuit and Short to Ground flags set together by EM IL, FMI 5 used for both. EM_SH O47220 Pin D28 - Gate Interlock Solenoid valve EM_SH O47220 Pin D05 - Low Range Solenoid valve Low Side switch: - S. C. to Vatal Coverload detected in Off condition - Open Load detected in Off condition - S. C. to Condition (Fault active below 20u4-2mA) Open Circuit and Short to Ground flags set together by EM IL, FMI 5 used for both. EM_SH O47220 Pin D05 - Low Range Solenoid valve Low Side switch: - S. C. to Vatal / Overload detected in On condition - S. C. to Condition (Fault active below 20u4-2mA) Open Circuit and Short to Ground flags set together by EM IL, FMI 5 used for both. EM_SH O47220 Pin D05 - Low Range Solenoid valve Low Side switch: - S. C. to Vatal / Overload detected in On condition - S. C. to Condition (Fault active below 20u4-2mA) Open Circuit and Short to Ground flags set together by EM IL, FMI 5 used for both in Condition (Fault active below 20u4-2mA) Open Circuit and Short to Ground flags set together by EM IL, FMI 5 used for both in Condition (Fault active below 20u4-2mA) Open Circuit and Short to Ground flags set together by EM IL, FMI 5 used	VCM VCM VCM VCM VCM VCM VCM VCM VCM	427E3 427E6 427E7 427F0 427F1 427F2 427F3 427F4 427FB	Instrument Cluster Bus (ACC sensor) FMS Bus FMS Bus (EP1) Power Supply Key 15 Power Supply Key 30 Internal Failure 1 (Runcontrol) Internal Failure 6 (Rx Lookuptable) Internal Failure 7 (CPU overlooad) Internal Failure 3 (RAM / ROM)	not supported: TSC1_PER timeout (ICB) not supported: EMZBC timeout (ICB) not supported: CTL timeout (ICB) not supported: ASC2 timeout (ICB) IC2BC timeout (ICB) ACC2 timeout (ICB) ACC SI timeout (ICB) ACC SI timeout (ICB) DM1_ACCSens timeout (ICB) FMS bus off FMS limitation FLEX0 time out (FMS) FLEX1 time out (FMS) FLEX1 time out (FMS) FLEX2 time out (FMS) FLEX2 time out (FMS) FLEX4 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX8 time out (FMS) FLEX1 time out (FMS) XFLEX0 time out (FMS) XFLEX1 time out (FMS) XFLEX1 time out (FMS) EXPLEX1 time out (FMS) EXPLEX1 time out (FMS) FLEX1 time out (FMS) FLEX7 time out (FMS) EXPLEX1 time out (FMS) AFLEX1 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX8 time out (FMS) FLEX8 time out (FMS) FLEX9 time out (FMS	2	03 04 05 06 07 08 01 02 13 0A 01 02 03 04 05 06 07 07 08 09 04 00 01 02 03 04 05 06 07 07 08 09 09 09 09 09 09 09 09 09 09	03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 09: Abnormal update r	Yellow Yellow Yellow Yellow Red Red Yellow Red Yellow	
Controller failure Controlle	VCM	427E3 427E6 427E7 427F0 427F1 427F2 427F3 427F4 427FB	Instrument Cluster Bus (ACC sensor) FMS Bus FMS Bus (EP1) Power Supply Key 15 Power Supply Key 30 Internal Failure 1 (Runcontrol) Internal Failure 6 (Rx Lookuptable) Internal Failure 7 (CPU overlooad) Internal Failure 3 (RAM / ROM) Internal Failure 2 (EEPROM)	not supported: TSC1_PER timeout (ICB) not supported: EM2BC timeout (ICB) not supported: CTL timeout (ICB) not supported: ASC2 timeout (ICB) IC2BC timeout (ICB) ACC2 timeout (ICB) ACC2 St timeout (ICB) DM1_ACCSens timeout (ICB) FMS bus off FMS limitation FLEX0 time out (FMS) FLEX1 time out (FMS) FLEX2 time out (FMS) FLEX2 time out (FMS) FLEX3 time out (FMS) FLEX4 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX0 time out (FMS) KELX7 time out (FMS) FLEX0 time out (FMS) FLEX1 time out (FMS) FLEX1 time out (FMS) FLEX0 time out (FMS) FLEX1 time out (FMS) FLEX2 time out (FMS) FLEX3 time out (FMS) FLEX4 time out (FMS) FLEX4 time out (FMS) FLEX5 time out (FMS) FLEX5 time out (FMS) FLEX6 t	2	03 04 05 06 07 08 01 02 01 02 03 04 05 06 07 08 09 00 00 00 00 00 00 00 00 00	03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 09: Abnormal update rate 00: data valid but below normal operation range 01: data valid but above normal operation range 01: data valid but above normal operation range 01: data valid but below normal operation range 01: data valid but below normal operation range 01: data valid but above normal operation range 01: data valid but normal operation range 01: data erratic, intermittend or incorrect 02: data erratic, intermittend or incorrect 02: data erratic, intermittend or incorrect 02: data erratic, intermittend or incorrect 03: volt of calibration 04: voltage readibration 05: special instructions 06: special instructions 17: not available or condition exists	Yellow Yellow Yellow Yellow Red Red Yellow Red Yellow Yellow Yellow	
EM_SH 047225 Pin A07 - Singel-H Buzzer Output High Sides witch: 4 04 Voltage below normal or shorted to low source - S.C. to Vbat detected in Off condition - S.C. to Vbat Vbat detected in Off condition - S.C. to Vbat Vbat Vbat Side switch: - S.C. to Vbat Vbat Side	VCM	427E3 427E6 427E7 427F0 427F1 427F2 427F3 427F4 427FB	Instrument Cluster Bus (ACC sensor) FMS Bus FMS Bus (EP1) Power Supply Key 15 Power Supply Key 30 Internal Failure 1 (Runcontrol) Internal Failure 6 (Rx Lookuptable) Internal Failure 7 (CPU overlooad) Internal Failure 3 (RAM / ROM) Internal Failure 2 (EEPROM)	not supported: TSC1_PER timeout (ICB) not supported: EM2BC timeout (ICB) not supported: CTL timeout (ICB) not supported: ASC2 timeout (ICB) IC2BC timeout (ICB) ACC2 timeout (ICB) ACC2 St timeout (ICB) ACC3 St timeout (ICB) DM1_ACCSens timeout (ICB) FMS bus off FMS limitation FLEX0 time out (FMS) FLEX1 time out (FMS) FLEX1 time out (FMS) FLEX2 time out (FMS) FLEX4 time out (FMS) FLEX5 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) KEVA1 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) EVENT	2	03 04 05 06 07 08 01 02 13 0A 01 02 13 0A 01 02 03 04 05 06 07 08 09 00 00 00 00 00 00 00 00 00	03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 09: Abnormal update rate 01: Abnormal update rate 01: Abnormal update rate 02: Abnormal update rate 02: Abnormal update rate 02: Abnormal update rate 03: received network data in error 04: abnormal rate of change 01: Abnormal update rate 02: Abnormal update rate 03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 09: Abnormal update rate 09: Abnormal update rate 00: October of the state of the stat	Yellow Yellow Yellow Yellow Red Red Yellow Red Yellow Yellow Yellow	
EM_SH O47225 Pin A07 - Singel-H Buzzer Output High Side switch: - S.C. to Vabat detected in Off condition - S.C. to Vabat detected in Off condition - S.C. to Vabat detected in Off condition - S.C. to Sand / Overload detected in Off condition - S.C. to Sand / Overload detected in Off condition - S.C. to Sand detected in O	VCM	427E3 427E6 427E7 427E7 427F0 427F1 427F2 427FB 427FB 427FE	Instrument Cluster Bus (ACC sensor) FMS Bus FMS Bus (EP1) Power Supply Key 15 Power Supply Key 30 Internal Failure 1 (Runcontrol) Internal Failure 7 (CPU overlooad) Internal Failure 3 (RAM / ROM) Internal Failure 2 (EEPROM) Internal Failure 4 (Controller)	not supported: TSC1_PER timeout (ICB) not supported: EMZBC timeout (ICB) not supported: CTL timeout (ICB) not supported: ASC2 timeout (ICB) IC2BC timeout (ICB) ACC2 timeout (ICB) ACC SI timeout (ICB) ACC SI timeout (ICB) DM1_ACCSens timeout (ICB) FMS bus off FMS limitation FLEX0 time out (FMS) FLEX1 time out (FMS) FLEX2 time out (FMS) FLEX2 time out (FMS) FLEX3 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX8 time out (FMS) FLEX1 time out (FMS) FLEX1 time out (FMS) XFLEX1 time out (FMS) XFLEX1 time out (FMS) Key 15 transition resistence Key 15 active and CAN status inactive Key 15 inactive and CAN status active External rucontrol Internal rucontrol Watchdog timeout CAN Lookuptable overflow CPU overload RAM failuire ROM failure Checksum parameter range Checksum prameter range Checksum production data Checksum runtime counter Parameter version wrong Operating system failure Software trap Controller failure	2	03 04 05 06 07 08 01 02 13 0A 01 02 03 04 05 06 07 08 09 0A 01 00 00 00 00 00 00 00 00 00 00 00 00	03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 09: Didate rate in the rate	Yellow Yellow Yellow Yellow Red Red Yellow Red Yellow Yellow Red	
- S.C. to Gnd / Overload detected in On condition - Open Load detected in Off condition Open Circuit and Short to Battery flags set together by EM IL, FMI 5 used for both. Low Side switch: - S.C. to Vbat / Overload detected in On condition - Open Load detected in Off condition - S.C. to Vbat / Overload detected in Off condition - Open Load detected in Off condition - Open Load detected in Off condition - S.C. to Vbat / Overload detected in Off condition - S.C. to Vbat / Overload detected in Off condition - Open Load detected in Off condition - S.C. to Vbat / Overload detected in Off condition - S.C. to Vbat / Overload detected in Off condition - S.C. to Vbat / Overload detected in Off condition - S.C. to Vbat / Overload detected in Off condition - S.C. to Vbat / Overload detected in Off condition - S.C. to Vbat / Overload detected in Off condition - S.C. to Vbat / Overload detected in Off condition - S.C. to Vbat / Overload detected in Off condition - S.C. to Open Circuit and Short to Ground flags set together by EM IL, FMI 5 used Pin D05 - Low Range Solenoid valve Low Side switch: - S.C. to Vbat / Overload detected in Off condition - S.C. to Open Circuit and Short to Ground flags set together by EM IL, FMI 5 used Voltage above normal, or shorted to high source Current below normal, or shorted to high	VCM	427E3 427E6 427E7 427E7 427F0 427F1 427F2 427F8 427FB 427FB 427FE	Instrument Cluster Bus (ACC sensor) FMS Bus FMS Bus (EP1) Power Supply Key 15 Power Supply Key 30 Internal Failure 1 (Runcontrol) Internal Failure 3 (Rx Lookuptable) Internal Failure 7 (CPU overlooad) Internal Failure 3 (RAM / ROM) Internal Failure 2 (EEPROM) Internal Failure 4 (Controller)	not supported: TSC1_PER timeout (ICB) not supported: EMZBC timeout (ICB) not supported: CTL timeout (ICB) not supported: ASC2 timeout (ICB) IC2BC timeout (ICB) ACC2 timeout (ICB) ACC2 St timeout (ICB) DM1_ACCSens timeout (ICB) FMS bus off FMS limitation FLEX0 time out (FMS) FLEX1 time out (FMS) FLEX2 time out (FMS) FLEX2 time out (FMS) FLEX3 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX8 time out (FMS) FLEX8 time out (FMS) FLEX9 time out (FMS) FLEX1 time out (FMS) FLEX2 time out (FMS) FLEX3 time out (FMS) FLEX4 time out (FMS) FLEX4 time out (FMS) FLEX5 time out (FMS) FLEX5 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX1 time out (FMS) FLEX1 time out (FMS) FLEX3 time out (FMS) FLEX4 time out (FMS) FLEX5 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX8 time out (FMS) FLEX7 t		03 04 05 06 07 08 01 02 03 04 05 06 07 08 09 00 00 01 02 03 04 05 06 07 08 09 00 00 00 00 00 00 00 00 00	03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 09: O2: data erratic, intermittend or incorrect 09: voltage below or normal or shorted high 04: voltage below or normal operation range 01: data valid but above normal operation range 01: data valid but below normal operation range 01: data valid but delow normal operation range 01: data valid but delow normal operation range 02: data erratic, intermittend or incorrect 09: data erratic, intermittend or incorrect 00: data erratic, intermittend or incor	Yellow Yellow Yellow Yellow Red Red Yellow Red Yellow Red Red Red Red Red	
Open Circuit and Short to Battery flags set together by EM IL, FMI 5 used for both. EM_SH O47226 Pin D28 - Gate Interlock Solenoid valve EM_SH O47220 Pin D05 - Low Range Solenoid valve Low Side switch: - S.C. to Vat / Overload detected in Off condition - Open Circuit and Short to Ground flags set together by EM IL, FMI 5 used for both. EM_SH O47220 Pin D05 - Low Range Solenoid valve Low Side switch: - S.C. to Vat / Overload detected in Off condition - Open Circuit and Short to Ground flags set together by EM IL, FMI 5 used for both. EM_SH O47220 Open Circuit and Short to Battery flags set together by EM IL, FMI 5 used for both. Sc. to Vat / Overload detected in Off condition - S.C. to Vat / Overload detected in On condition - S.C. to Gnd detected in Off condition (fault active below 20uA+2mA) Open Circuit and Short to Ground flags set together by EM IL, FMI 5 used Sc. to Vat / Overload detected in Off condition (fault active below 20uA+2mA) Open Circuit and Short to Ground flags set together by EM IL, FMI 5 used	VCM	427E3 427E6 427E7 427E7 427F0 427F1 427F2 427F8 427FB 427FB 427FE	Instrument Cluster Bus (ACC sensor) FMS Bus FMS Bus (EP1) Power Supply Key 15 Power Supply Key 30 Internal Failure 1 (Runcontrol) Internal Failure 3 (Rx Lookuptable) Internal Failure 7 (CPU overlooad) Internal Failure 3 (RAM / ROM) Internal Failure 2 (EEPROM) Internal Failure 4 (Controller)	not supported: TSC1_PER timeout (ICB) not supported: EMZBC timeout (ICB) not supported: CTL timeout (ICB) not supported: ASC2 timeout (ICB) IC2BC timeout (ICB) ACC2 timeout (ICB) ACC_SI timeout (ICB) ACC_SI timeout (ICB) DM1_ACCSens timeout (ICB) FMS bus off FMS limitation FLEX0 time out (FMS) FLEX1 time out (FMS) FLEX1 time out (FMS) FLEX2 time out (FMS) FLEX2 time out (FMS) FLEX4 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX1 time out (FMS) FLEX1 time out (FMS) XFLEX0 time out (FMS) XFLEX1 time out (FMS) XFLEX1 time out (FMS) XFLEX1 time out (FMS) EXF1 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX8 time out (FMS) FLEX8 time out (FMS) FLEX8 time out (FMS) FLEX9	4	03 04 05 06 07 08 01 02 13 0A 01 02 03 04 05 06 07 08 09 0A 01 0C 0D 0E 0D 0E 0D 0E 0D 0E 0D 0B 0C 0D 0D 0E 0D	03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 09: Abnormal update rate 00: Obligate obligate of the state	Yellow Yellow Yellow Yellow Red Red Yellow Red Yellow Red Red Red Red Red	
EM_SH O47226 Pin D28 - Gate Interlock Solenoid valve Low Side switch: - S.C. to Vbat / Overload detected in Off condition - Open Load detected in Off condition Open Circuit and Short to Ground flags set together by EM IL, FMI 5 used for both. EM_SH O47220 Pin D05 - Low Range Solenoid valve Low Side switch: - S.C. to Vbat / Overload detected in Off condition - Open Load detected in Off condition - S.C. to Wat / Overload detected in Off condition - S.C. to Wat / Overload detected in Off condition - Open Load detected in Off condition - S.C. to Wat / Overload detected in Off condition - S.C. to Wat / Overload detected in Off condition - S.C. to Wat / Overload detected in Off condition - S.C. to Wat / Overload detected in Off condition - S.C. to Wat / Overload detected in Off condition - S.C. to Wat / Overload detected in Off condition - S.C. to Wat / Overload detected in Off condition - S.C. to Gnd detected in Off condition - Open Load detected in Off condition - Open Load detected in Off condition (fault active below 20uA+2mA) Open Circuit and Short to Ground flags set together by EM IL, FMI 5 used	VCM	427E3 427E6 427E7 427E7 427F0 427F1 427F2 427F8 427FB 427FB 427FE	Instrument Cluster Bus (ACC sensor) FMS Bus FMS Bus (EP1) Power Supply Key 15 Power Supply Key 30 Internal Failure 1 (Runcontrol) Internal Failure 3 (Rx Lookuptable) Internal Failure 7 (CPU overlooad) Internal Failure 3 (RAM / ROM) Internal Failure 2 (EEPROM) Internal Failure 4 (Controller)	not supported: TSC1_PER timeout (ICB) not supported: EMZBC timeout (ICB) not supported: CTL timeout (ICB) not supported: ASC2 timeout (ICB) IC2BC timeout (ICB) ACC2 timeout (ICB) ACC2 St timeout (ICB) ACC3 St timeout (ICB) DM1_ACCSens timeout (ICB) FMS bus off FMS limitation FLEX0 time out (FMS) FLEX1 time out (FMS) FLEX2 time out (FMS) FLEX2 time out (FMS) FLEX3 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX8 time out (FMS) FLEX8 time out (FMS) FLEX9 time out (FMS) FLEX1 time out (FMS) FLEX2 time out (FMS) FLEX3 time out (FMS) FLEX4 time out (FMS) FLEX4 time out (FMS) FLEX5 time out (FMS) FLEX5 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX8 time out (FMS) FLEX8 time out (FMS) FLEX7 time out (FMS) FLEX8 time out (FMS) FLEX8 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX8 time out (FMS) FLEX7 time out (FMS) FLEX8	4	03 04 05 06 07 08 01 02 13 0A 01 02 03 04 05 06 07 08 09 0A 01 0C 0D 0E 0D 0E 0D 0E 0D 0E 0D 0B 0C 0D 0D 0E 0D	03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 09: Abnormal update rate 00: Obligate obligate of the state	Yellow Yellow Yellow Yellow Red Red Yellow Red Yellow Red Red Red Red Red	
- S.C. to Gnd detected in Off condition - Open Load detected in Off condition (fault active below 20uA+2mA) Open Circuit and Short to Ground flags set together by EM IL, FMI 5 used for both. EM_SH	VCM	427E3 427E6 427E7 427E7 427F0 427F1 427F2 427F8 427FB 427FB 427FE	Instrument Cluster Bus (ACC sensor) FMS Bus FMS Bus (EP1) Power Supply Key 15 Power Supply Key 30 Internal Failure 1 (Runcontrol) Internal Failure 3 (Rx Lookuptable) Internal Failure 7 (CPU overlooad) Internal Failure 3 (RAM / ROM) Internal Failure 2 (EEPROM) Internal Failure 4 (Controller)	not supported: TSC1_PER timeout (ICB) not supported: EM2BC timeout (ICB) not supported: CTL timeout (ICB) not supported: ASC2 timeout (ICB) IC2BC timeout (ICB) ACC2 timeout (ICB) ACC2 St timeout (ICB) ACC2 St timeout (ICB) DM1_ACCSens timeout (ICB) FMS bus off FMS limitation FLEX0 time out (FMS) FLEX1 time out (FMS) FLEX1 time out (FMS) FLEX2 time out (FMS) FLEX2 time out (FMS) FLEX3 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) KELX7 time out (FMS) FLEX8 time out (FMS) FLEX7 time out (FMS) FLEX8 time out (FMS) FLEX8 time out (FMS) FLEX8 time out (FMS) FLEX9 time out (FMS) FLEX9 time out (FMS) FLEX9 time out (FMS) Key 15 transition resistence Key 15 active and CAN status inactive Key 15 inactive and CAN status active External rucontrol Internal rucontrol Watchdog timeout CAN Lookuptable overflow CPU overload RAM failuire ROM failuire ROM failure Checksum parameter range Checksum environment data Checksum environment data Checksum runtime counter Parameter version wrong Operating system failure Flash parameter failure Flash program f	4	03 04 05 06 07 08 01 02 13 0A 01 02 03 04 05 06 07 08 09 0A 01 0C 0D 0E 0D 0E 0D 0E 0D 0E 0D 0B 0C 0D 0D 0E 0D	03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 09: Abnormal update rate 00: Obligate obligate of the state	Yellow Yellow Yellow Yellow Red Red Yellow Red Yellow Red Red Red Red Red	
Open Circuit and Short to Ground flags set together by EM IL, FMI 5 used for both. EM_SH 047220 Pin D05 - Low Range Solenoid valve Low Side switch: - S.C. to Vbat / Overload detected in On condition - S.C. to Gnd detected in Off condition - Open Load detected in Off condition - Open Load detected in Off condition (fault active below 20uA+2mA) Open Circuit and Short to Ground flags set together by EM IL, FMI 5 used Voltage above normal, or shorted to high source Current below normal or open circuit (also in case of Voltage below normal, or shorted to low source)	VCM	427E3 427E6 427E7 427E7 427F0 427F1 427F2 427F3 427F4 427FB 427FB 427FF 427FF 047225	Instrument Cluster Bus (ACC sensor) FMS Bus FMS Bus (EP1) Power Supply Key 15 Power Supply Key 30 Internal Failure 1 (Runcontrol) Internal Failure 7 (CPU overlooad) Internal Failure 3 (RAM / ROM) Internal Failure 2 (EEPROM) Internal Failure 4 (Controller) Internal Failure 5 (Boottoader) Pin A07 - Singel-H Buzzer Output	not supported: TSC1_PER timeout (ICB) not supported: EMZBC timeout (ICB) not supported: CTL timeout (ICB) not supported: ASC2 timeout (ICB) IC2BC timeout (ICB) ACC2_St timeout (ICB) ACC_St timeout (ICB) ACC_St timeout (ICB) DM1_ACCSens timeout (ICB) FMS bus off FMS limitation FLEX0 time out (FMS) FLEX1 time out (FMS) FLEX1 time out (FMS) FLEX2 time out (FMS) FLEX2 time out (FMS) FLEX4 time out (FMS) FLEX5 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX8 time out (FMS) FLEX8 time out (FMS) FLEX9 time out (FMS) XFLEX1 time out (FMS) XFLEX1 time out (FMS) XFLEX1 time out (FMS) Key 15 transition resistence Key 15 active and CAN status inactive Key 15 inactive and CAN status active External rucontrol Internal rucontrol Watchdog timeout CAN Lookuptable overflow CPU overload RAM failuire ROM failure Checksum parameter range Checksum production data Checksum environment data Checksum production data Checksum prod	4 5	03 04 05 06 07 08 01 02 13 0A 01 02 03 04 05 06 07 07 08 09 0A 00 00 00 00 00 00 00 00 00	03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 09: Oblidate of the total t	Yellow Yellow Yellow Yellow Red Red Yellow Red	
EM_SH O47220 Pin D05 - Low Range Solenoid valve Low Side switch: - S.C. to Vbat / Overload detected in On condition - S.C. to Gnd detected in Off condition - Open Load detected in Off condition (fault active below 20uA+2mA) Open Circuit and Short to Ground flags set together by EM IL, FMI 5 used	VCM	427E3 427E6 427E7 427E7 427F0 427F1 427F2 427F3 427F4 427FB 427FB 427FF 427FF 047225	Instrument Cluster Bus (ACC sensor) FMS Bus FMS Bus (EP1) Power Supply Key 15 Power Supply Key 30 Internal Failure 1 (Runcontrol) Internal Failure 7 (CPU overlooad) Internal Failure 3 (RAM / ROM) Internal Failure 2 (EEPROM) Internal Failure 4 (Controller) Internal Failure 5 (Boottoader) Pin A07 - Singel-H Buzzer Output	not supported: TSC1_PER timeout (ICB) not supported: EMZBC timeout (ICB) not supported: CTL timeout (ICB) not supported: ASC2 timeout (ICB) IC2BC timeout (ICB) ACC2 timeout (ICB) ACC2 St timeout (ICB) ACC3 St timeout (ICB) DM1_ACCSens timeout (ICB) FMS bus off FMS limitation FLEX0 time out (FMS) FLEX1 time out (FMS) FLEX2 time out (FMS) FLEX2 time out (FMS) FLEX3 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX8 time out (FMS) FLEX8 time out (FMS) FLEX9 time out (FMS) FLEX9 time out (FMS) FLEX9 time out (FMS) FLEX1 time out (FMS) FLEX8 time out (FMS) FLEX1 time out (FMS) FLEX9	4 5	03 04 05 06 07 08 01 02 13 0A 01 02 03 04 05 06 07 07 08 09 0A 00 00 00 00 00 00 00 00 00	03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 09: Abnormal update rate 00: Obligate of the state of the s	Yellow Yellow Yellow Yellow Red Red Yellow Red	
- S.C. to Vbat / Overload detected in On condition - S.C. to Gnd detected in Off condition - Open Load detected in Off condition (fault active below 20uA+2mA) Open Circuit and Short to Ground flags set together by EM IL, FMI 5 used	VCM	427E3 427E6 427E7 427E7 427F0 427F1 427F2 427F3 427F4 427FB 427FB 427FF 427FF 047225	Instrument Cluster Bus (ACC sensor) FMS Bus FMS Bus (EP1) Power Supply Key 15 Power Supply Key 30 Internal Failure 1 (Runcontrol) Internal Failure 7 (CPU overlooad) Internal Failure 3 (RAM / ROM) Internal Failure 2 (EEPROM) Internal Failure 4 (Controller) Internal Failure 5 (Boottoader) Pin A07 - Singel-H Buzzer Output	not supported: TSC1_PER timeout (ICB) not supported: EM2BC timeout (ICB) not supported: CTL timeout (ICB) not supported: ASC2 timeout (ICB) IC2BC timeout (ICB) ACC2 timeout (ICB) ACC2 St timeout (ICB) DM1_ACCSens timeout (ICB) FMS bus off FMS limitation FLEX0 time out (FMS) FLEX1 time out (FMS) FLEX1 time out (FMS) FLEX2 time out (FMS) FLEX2 time out (FMS) FLEX3 time out (FMS) FLEX4 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX8 time out (FMS) FLEX8 time out (FMS) FLEX9 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX8 time out (FMS) FLEX9 t	4 5	03 04 05 06 07 08 01 02 13 0A 01 02 03 04 05 06 07 07 08 09 0A 00 00 00 00 00 00 00 00 00	03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 09: Abnormal update rate 00: Obligate of the state of the s	Yellow Yellow Yellow Yellow Red Red Yellow Red	
- S.C. to Vbat / Overload detected in On condition - S.C. to Gnd detected in Off condition - Open Load detected in Off condition (fault active below 20uA+2mA) Open Circuit and Short to Ground flags set together by EM IL, FMI 5 used	VCM	427E3 427E6 427E7 427E7 427F0 427F1 427F2 427F3 427F4 427FB 427FB 427FF 427FF 047225	Instrument Cluster Bus (ACC sensor) FMS Bus FMS Bus (EP1) Power Supply Key 15 Power Supply Key 30 Internal Failure 1 (Runcontrol) Internal Failure 7 (CPU overlooad) Internal Failure 3 (RAM / ROM) Internal Failure 2 (EEPROM) Internal Failure 4 (Controller) Internal Failure 5 (Boottoader) Pin A07 - Singel-H Buzzer Output	not supported: TSC1_PER timeout (ICB) not supported: EM2BC timeout (ICB) not supported: CTL timeout (ICB) not supported: ASC2 timeout (ICB) IC2BC timeout (ICB) ACC2 timeout (ICB) ACC2 St timeout (ICB) DM1_ACCSens timeout (ICB) FMS bus off FMS limitation FLEX0 time out (FMS) FLEX1 time out (FMS) FLEX1 time out (FMS) FLEX2 time out (FMS) FLEX2 time out (FMS) FLEX3 time out (FMS) FLEX4 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX8 time out (FMS) FLEX8 time out (FMS) FLEX9 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX8 time out (FMS) FLEX9 t	4 5	03 04 05 06 07 08 01 02 13 0A 01 02 03 04 05 06 07 07 08 09 0A 00 00 00 00 00 00 00 00 00	03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 09: Abnormal update rate 00: Obligate of the state of the s	Yellow Yellow Yellow Yellow Red Red Yellow Red	
- S.C. to Vbat / Overload detected in On condition - S.C. to Gnd detected in Off condition - Open Load detected in Off condition (fault active below 20uA+2mA) Open Circuit and Short to Ground flags set together by EM IL, FMI 5 used	VCM	427E3 427E6 427E7 427E7 427F0 427F1 427F2 427F3 427F4 427FB 427FB 427FF 427FF 047225	Instrument Cluster Bus (ACC sensor) FMS Bus FMS Bus (EP1) Power Supply Key 15 Power Supply Key 30 Internal Failure 1 (Runcontrol) Internal Failure 7 (CPU overlooad) Internal Failure 3 (RAM / ROM) Internal Failure 2 (EEPROM) Internal Failure 4 (Controller) Internal Failure 5 (Boottoader) Pin A07 - Singel-H Buzzer Output	not supported: TSC1_PER timeout (ICB) not supported: EM2BC timeout (ICB) not supported: CTL timeout (ICB) not supported: ASC2 timeout (ICB) IC2BC timeout (ICB) ACC2 timeout (ICB) ACC2 St timeout (ICB) DM1_ACCSens timeout (ICB) FMS bus off FMS limitation FLEX0 time out (FMS) FLEX1 time out (FMS) FLEX1 time out (FMS) FLEX2 time out (FMS) FLEX2 time out (FMS) FLEX3 time out (FMS) FLEX4 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX8 time out (FMS) FLEX8 time out (FMS) FLEX9 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX8 time out (FMS) FLEX9 t	4 5	03 04 05 06 07 08 01 02 13 0A 01 02 03 04 05 06 07 07 08 09 0A 00 00 00 00 00 00 00 00 00	03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 09: Abnormal update rate 00: Obligate of the state of the s	Yellow Yellow Yellow Yellow Red Red Yellow Red	
- S.C. to Vbat / Overload detected in On condition - S.C. to Gnd detected in Off condition - Open Load detected in Off condition (fault active below 20uA+2mA) Open Circuit and Short to Ground flags set together by EM IL, FMI 5 used	VCM	427E3 427E6 427E7 427E7 427F0 427F1 427F2 427F3 427F4 427FB 427FB 427FF 427FF 047225	Instrument Cluster Bus (ACC sensor) FMS Bus FMS Bus (EP1) Power Supply Key 15 Power Supply Key 30 Internal Failure 1 (Runcontrol) Internal Failure 7 (CPU overlooad) Internal Failure 3 (RAM / ROM) Internal Failure 2 (EEPROM) Internal Failure 4 (Controller) Internal Failure 5 (Boottoader) Pin A07 - Singel-H Buzzer Output	not supported: TSC1_PER timeout (ICB) not supported: EM2BC timeout (ICB) not supported: CTL timeout (ICB) not supported: ASC2 timeout (ICB) IC2BC timeout (ICB) ACC2 timeout (ICB) ACC2 St timeout (ICB) DM1_ACCSens timeout (ICB) FMS bus off FMS limitation FLEX0 time out (FMS) FLEX1 time out (FMS) FLEX1 time out (FMS) FLEX2 time out (FMS) FLEX2 time out (FMS) FLEX3 time out (FMS) FLEX4 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX8 time out (FMS) FLEX8 time out (FMS) FLEX9 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX8 time out (FMS) FLEX9 t	4 5	03 04 05 06 07 08 01 02 13 0A 01 02 03 04 05 06 07 07 08 09 0A 00 00 00 00 00 00 00 00 00	03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 09: Abnormal update rate 00: Obligate of the state of the s	Yellow Yellow Yellow Yellow Red Red Yellow Red	
- Open Load detected in Off condition (fault active below 20uA+2mA) Open Circuit and Short to Ground flags set together by EM IL, FMI 5 used	VCM	427E3 427E6 427E7 427F0 427F1 427F2 427F3 427F4 427FB 427FD 427FF 047225	Instrument Cluster Bus (ACC sensor) FMS Bus FMS Bus (EP1) Power Supply Key 15 Power Supply Key 30 Internal Failure 1 (Runcontrol) Internal Failure 6 (Rx Lookuptable) Internal Failure 7 (CPU overload) Internal Failure 3 (RAM / ROM) Internal Failure 2 (EEPROM) Internal Failure 5 (Bootloader) Internal Failure 5 (Bootloader) Pin A07 - Singel-H Buzzer Output Pin D28 - Gate Interlock Solenoid valve	not supported: TSC1_PER timeout (ICB) not supported: EM2BC timeout (ICB) not supported: CTL timeout (ICB) not supported: ASC2 timeout (ICB) IC2BC timeout (ICB) ACC2_St timeout (ICB) ACC2_St timeout (ICB) ACC2_St timeout (ICB) ACC3_St timeout (ICB) FMS bus off FMS bus off FMS limitation FLEX0 time out (FMS) FLEX1 time out (FMS) FLEX1 time out (FMS) FLEX2 time out (FMS) FLEX3 time out (FMS) FLEX4 time out (FMS) FLEX4 time out (FMS) FLEX5 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) KEY 15 transition resistence Key 15 active and CAN status inactive Key 15 inactive and CAN status active External rucontrol Internal rucontrol Internal rucontrol Watchdog timeout CAN Lookuptable overflow CPU overload RAM failuire ROM failure ROM failure ROM failure ROM failure ROM failure Checksum parameter range Checksum environment data Checksum environment data Checksum production data Checksum producti	4 5 5	03 04 05 06 07 08 01 02 01 02 03 04 05 06 07 08 09 00 00 01 02 03 04 05 06 07 08 09 00 00 00 01 00 00 00 00 00 00	03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 09: Abnormal rate rate rate rate rate rate rate rate	Yellow Yellow Yellow Yellow Red Red Yellow Yellow Red Yellow Red Red Tyellow Red Red Red Tyellow Red Red Red Red Red Red	
	VCM	427E3 427E6 427E7 427F0 427F1 427F2 427F3 427F4 427FB 427FD 427FF 047225	Instrument Cluster Bus (ACC sensor) FMS Bus FMS Bus (EP1) Power Supply Key 15 Power Supply Key 30 Internal Failure 1 (Runcontrol) Internal Failure 6 (Rx Lookuptable) Internal Failure 7 (CPU overload) Internal Failure 3 (RAM / ROM) Internal Failure 2 (EEPROM) Internal Failure 5 (Bootloader) Internal Failure 5 (Bootloader) Pin A07 - Singel-H Buzzer Output Pin D28 - Gate Interlock Solenoid valve	not supported: TSC1_PER timeout (ICB) not supported: EM2BC timeout (ICB) not supported: ASC2 timeout (ICB) Inct supported: ASC2 timeout (ICB) Inct supported: ASC2 timeout (ICB) ACC2 timeout (ICB) ACC2 timeout (ICB) ACC2 timeout (ICB) ACC3 timeout (ICB) DM1_ACC5ens timeout (ICB) FMS bus off FMS limitation FLEX0 time out (FMS) FLEX1 time out (FMS) FLEX1 time out (FMS) FLEX1 time out (FMS) FLEX2 time out (FMS) FLEX4 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) KYFLEX1 time out (FMS) FLEX1 time out (FMS) FLEX2 time out (FMS) FLEX2 time out (FMS) FLEX2 time out (FMS) FLEX5	4 5 5	03 04 05 06 07 08 01 02 01 02 03 04 05 06 07 08 09 00 00 01 02 03 04 05 06 07 08 09 00 00 00 01 00 00 00 00 00 00	03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 09: Abnormal rate rate rate rate rate rate rate rate	Yellow Yellow Yellow Yellow Red Red Yellow Yellow Red Yellow Red Red Tyellow Red Red Red Tyellow Red Red Red Red Red Red	
	VCM	427E3 427E6 427E7 427F0 427F1 427F2 427F3 427F4 427FB 427FD 427FF 047225	Instrument Cluster Bus (ACC sensor) FMS Bus FMS Bus (EP1) Power Supply Key 15 Power Supply Key 30 Internal Failure 1 (Runcontrol) Internal Failure 6 (Rx Lookuptable) Internal Failure 7 (CPU overload) Internal Failure 3 (RAM / ROM) Internal Failure 2 (EEPROM) Internal Failure 5 (Bootloader) Internal Failure 5 (Bootloader) Pin A07 - Singel-H Buzzer Output Pin D28 - Gate Interlock Solenoid valve	not supported: TSC1_PER timeout (ICB) not supported: EM2BC timeout (ICB) not supported: ASC2 timeout (ICB) not supported: ASC2 timeout (ICB) IC2BC timeout (ICB) ACC2 timeout (ICB) ACC2 timeout (ICB) ACC3 timeout (ICB) ACC3 timeout (ICB) DM1_ACC5ens timeout (ICB) FMS bus off FMS limitation FLEX0 time out (FMS) FLEX1 time out (FMS) FLEX1 time out (FMS) FLEX1 time out (FMS) FLEX2 time out (FMS) FLEX4 time out (FMS) FLEX6 time out (FMS) FLEX6 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX7 time out (FMS) FLEX1 time out (FMS) FLEX2 time out (FMS) FLEX1 time out (FMS) FLEX1 time out (FMS) FLEX2 time out (FMS) FLEX2 time out (FMS) FLEX3 time out (FMS) FLEX5 time out (FMS) FLEX1 time out (FMS) FLEX2 time out (FMS) FLEX2 time out (FMS) FLEX2 time out (FMS) FLEX5 time out (FMS) FLEX2 time out (FMS) FLEX5 time ou	4 5 5	03 04 05 06 07 08 01 02 01 02 03 04 05 06 07 08 09 00 00 01 02 03 04 05 06 07 08 09 00 00 00 01 00 00 00 00 00 00	03: Abnormal update rate 04: Abnormal update rate 05: Abnormal update rate 06: Abnormal update rate 07: Abnormal update rate 08: Abnormal update rate 09: Abnormal rate rate rate rate rate rate rate rate	Yellow Yellow Yellow Yellow Red Red Yellow Yellow Red Yellow Red Red Tyellow Red Red Red Tyellow Red Red Red Red Red Red	

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Name	SPN [Hex]	Fault Component	Description	FMI [DEC]		Description	Lamp	Comment
EM_SH	047221	Pin D04 - High Range Solenoid valve	Low Side switch: - S.C. to Vbat / Overload detected in On condition	3 5	03 05	Current below normal or open circuit (also in case of Voltage below	Red	
			- S.C. to Gnd detected in Off condition - Open Load detected in Off condition (fault active below 20uA÷2mA)			normal, or shorted to low source)		
			Open Circuit and Short to Ground flags set together by EM IL, FMI 5 used for both.					
EM_SH	47222	Pin A01 - Safety	High Side switch: - S.C. to Vbat detected in Off condition	4 5	04 05	Current below normal or open circuit (also in case of Voltage	Red	
			- S.C. to Gnd / Overload detected in On condition - Open Load detected in Off condition (fault active below 20uA+2mA)			above normal, or shorted to high source)		
EM_SH	47223	Pin A04 - Splitter H	High Side switch: - S.C. to Gnd / Overload detected in On condition	4		Voltage below normal, or shorted to low source	Red	
EM_SH	47224	Pin A06 - Splitter L	High Side switch: - S.C. to Gnd / Overload detected in On condition	4		Voltage below normal, or shorted to low source	Red	
EM_SH	0472E1	Range Preselection switches	Plausibility error: "Range Presel Low Sw" and "Range Presel High Sw" having the same value	2		Plausibility error	Red	
EM_SH	0472E2	Clutch sensors	Plausibility error: "Clutch Open Switch" (alias "2nd Clutch Switch") closed while "CCVS-Clutch Switch" open.	2	02	Plausibility error	Red	
UDS DCU15	003D13	Battery voltage sensing (electrical)	Healed when "Clutch Open Switch" = open. 013_ABSI	3	03			FnR_DNOx2_p910vC241
				4 0	04 00	signal low signal above high error threshold		
UDS DCU15	003D13	Battery voltage sensing (electrical)	013ABSI	3	01	signal below low error threshold signal high	MIL	FnR_DNOx2_V74
UDS DCU15	003D14	Temperature sensor after catalyst (electrical)	014_ACTD2	0	00			Long Term failure
UDS DCU15	003D15	Temperature sensor after catalyst (electrical)	015_ACTD	3	01	signal low signal high	MIL	Power Reduction
UDS DCU15	003D16	Temperature sensor before catalyst	016_ACTU	3	04	signal low signal high		Long Term failure FnR_DNOx2_p910vC241
		(electrical)		4 0	04 00	signal low signal above high error threshold		
UDS DCU15	003D16	Temperature sensor before catalyst (electrical	016ACTU	3	01		MIL	FnR_DNOx2_V74
UDS DCU15	003D17	Sensor supply 1 (5V internal; for UREA level	017_DSS1	3	04	signal low Supply Voltage too high		Long Term failure
UDS DCU15	003D18	sensor) Sensor supply 2 (5V internal; for UREA	018_DSS2	3	04	Supply voltage too low Supply Voltage too high	MIL	
UDS DCU15	003D19	pressure sensors) UREA pressure sensor in box (electrical)	019_AUPS	3	04		MIL	Power Reduction
LIDO DOLLAS	000014	UDEAT.	ALL AUTO	4 2		supply voltage error		Long Term failure
UDS DCU15	003D1A	UREA Temperature sensor in box (electrical)	O IA_AUTO	3 4	03 04	signal high signal low		FnR_DNOx2_p910vC241
LIBO FOL	0005	LIDEA Toperation	MAAUTE	0	00 01	signal above high error threshold signal below low error threshold		EnD DNOv2 V74
UDS DCU15		UREA Temperature sensor in box (electrical)		3 4	03 04			FnR_DNOx2_V74
UDS DCU15	003D1B	UREA pressure evaluation(above and below limit)		0 1	00 01	diagnostic value below low limit		EnD DNOv2 n010x0244
UDS DCU15	003D21	Voltage supply internal heaters 1 (UB1) electrical	021_ABV1	3 5	05	Short to bat at UB1 with Key 15 off Open circuit to UB1 Cheet be bet at UB1 with Key 45 off	B 411	FnR_DNOv2_p910vC241
UDS DCU15	003D21	Voltage supply internal heaters 1 (UB1) electrical	021ABV1	6 5	06 05	Open circuit to UB1	MIL	FnR_DNOx2_V74 Long Term failure
UDS DCU15	003D22	Voltage supply 2 - tube heaters (UB2) electrical	022_ABV2	3 5	05	Open circuit to UB2		FnR_DNOx2_p910vC241
UDS DCU15	003D22	Voltage supply 2 - tube heaters (UB2)	022ABV2	3	03	Short circuit to Ground UB2 Short to bat at UB2 with Key 15 off		FnR_DNOx2_V74
LIBO FOL	0005-	electrical	033 ADV2	4 5	04 05	Short circuit to Ground UB2		EnD DNOv2 e010.0044
UDS DCU15	003D23	Voltage supply 3 - Coolant control valve and reverting valve (UB3) electrical	023_ABV3	3 5	03 05	Open circuit to UB3		FnR_DNOx2_p910vC241
UDS DCU15	003D23	Voltage supply 3 - Coolant control valve and	023ABV3	3	03	Short circuit to Ground UB3 Short to bat at UB3 with Key 15 off		FnR_DNOx2_V74
		reverting valve (UB3) electrical		4 5	05			
UDS DCU15	003D24	Monitoring VDD11/VDD25 voltage - Dosing valve/Pump motor	024_AV11	3	03 04	supply voltage VD11 low		FnR_DNOx2_p910vC241
				0	00 01	supply voltage VD25 high supply voltage VD25 low		
UDS DCU15	003D24	Monitoring VDD11 voltage - Dosing valve	024AV11	4	03	supply voltage high supply voltage low		FnR_DNOx2_V74
UDS DCU15	003D31	UREA level sensor (electrical)	031AULS	3	03 04	signal high signal low	MIL	FnR_DNOx2_V74
UDS DCU15	003D32	UREA Temperature sensor in Tank	032AUTT	3	02	signal high		FnR_DNOx2_V74
UDS DCU15	003D34	(electrical) UREA Quality Sensor	034EUQS	5		signal low open wire		FnR_DNOx2_V74
				6 7		not plausible		
				0	00	temperature outside operation range concentration higher than specified value		
				1 12	01 0C			
UDS DCU15	003D35	NOx sensor (self monitoring of sensor / only CAN message)	035NOXS	4		NOx Sensor Open circuit		FnR_DNOx2_V74
UDS DCU15	003D41	Diagnostic lamp (electrical)	041_PDIA	6	06			FnR_DNOx2_p910vC241
				3 5		Open load		
UDS DCU15	003D41	Diagnostic lamp (electrical)	041PDIA	3	04 03	short circuit to batt + open circuit or short to ground		FnR_DNOx2_V74
UDS DCU15	003D52	Dosing Valve (electrical)	052_PUDV	5 6	06	Open load short circuite to ground		FnR_DNOx2_p910vC241
				3 5	03 05	open load		
UDS DCU15	003D52	Dosing Valve (electrical)	052PUDV	4		Dosing valve permanent "ON" (detection via fast decay) short circuite to ground	MIL	FnR_DNOx2_V74
				3 5 7	03 05	short circuit to batt + open load		Long Term failure
UDS DCU15	003D53	UREA Pump speed	053_PUMP	7 7 8	07	Dosing valve permanent "ON" (detection via fast decay) pump motor blocked pump overspeed	MIL	Power Reduction Long Term failure
				2 12		pump motor unplugged		Long Term randre
UDS DCU15	003D55	Cooling control valve short circuit to UBat or open load	055_PCCV	12 3 5	0C 03 05	short circuit to battery		FnR_DNOx2_p910vC241
UDS DCU15	003D55	Cooling control valve short circuit to UBat or open load	055PCCV	6 5	06	Open load Short circuit to battery Open load		FnR_DNOx2_V74 Power Reduction
UDS DCU15	003D56	Cooling control valve short circuit to ground	056_PCCV2	6				Power Reduction Power Reduction
UDS DCU15	003D57	Reverting valve (4-2way valve?) electrically	057_PRVV	6	06 03	Short circuit to ground Short circuit to battery		FnR_DNOx2_p910vC241
UDS DCU15	003D57	Reverting valve (4-2way valve?) electrically	057PRVV	5 4	05 04	Open load		FnR DNOx2 V74
220 200 10	220001	g rand (. 2may valve :) electrically		3 5	03	Short circuit to ground Short circuit to battery Open load		
UDS DCU15	003D58	Valve Blocked Closed Test failed	058SUDV	12 6	0C 06		MIL	FnR_DNOx2_V74 Power Reduction
UDS DCU15	003D59	UREA dosing valve blocked	059PUDB	5	05 06	UREA Dosing valve blocked open	MIL	Fower Reduction Long Term failure FnR DNOx2 V74
UDS DCU15	003D59	Plausibility of UDV stuck	05A PUQP	5	05 06	UREA Dosing Valve blocked closed		Long Term failure
UDS DCU15	003D5A	UDV valve stuck position unknown error	05B PUVP	5				
UDS DCU15	003D3B	Line Heater back Flow tube	061_PBFH	6 5	06 05	Short circuit to ground Short circuit to battery		FnR_DNOx2_p910vC241
UDS DCU15	003D61	Line Heater back Flow tube	061PBFH	4	03	Open load Short circuit to ground		FnR_DNOx2_V74
20010				3	03	Short circuit to battery Open load		
UDS DCU15	003D63	Line Heater Inlet tube	063_PILH	6	06 03	Short circuit to ground Short circuit to battery		FnR_DNOx2_p910vC241
UDS DCU15	003D63	Line Heater Inlet tube	063PILH	3 5 4	05	Open load Short circuit to ground		FnR_DNOx2_V74
20010				3	03			
UDS DCU15	003D64	Filter outlet connector heater	064_POCH	6 3	06	Short circuit to ground Short circuit to battery		FnR_DNOx2_p910vC241
UDS DCU15	003D64	Filter outlet connector heater	064POCH	5	05 04	Open load Short circuit to ground		FnR_DNOx2_V74
20010				3	03 05	Short circuit to battery Open load		
UDS DCU15	003D65	Line Heater Compensation tube	065_PPCH	6 3	06 03	Short circuit to ground Short circuit to battery		FnR_DNOx2_p910vC241
UDS DCU15	003D65	Line Heater Compensation tube	065PPCH	5 4	05	Open load Short circuit to ground		FnR DNOx2 V74
23030010	1.0000			3	03			· - · -
UDS DCU15	003D66	Heater of UREA Pump	066_PPHT	6		short circuit to ground (UB5)		FnR_DNOx2_p910vC241
UDS DCU15	003D66	Heater of UREA Pump	066PPHT	5	05 04	Open circuit / broken pump module heater PTC		FnR DNOx2 V74
20.0				3	03	short circuit to bat (UB5) Short circuit to bat (UB5) Open circuit / broken pump module heater PTC		
UDS DCU15	003D67	Line Heater pressure tube (Box-Dosing module)	067_PPLH	6	06	Short circuit to ground		FnR_DNOx2_p910vC241
UDS DCU15	003D67	Line Heater pressure tube (Box-Dosing	067PPLH	3 5 4	05 04	Open load		FnR DNOx2 V74
2232010		module)		3	03	Short circuit to battery Open load		Long Term failure
		·	·					•

ECU	SPN	Fault Component	Description	FMI	FMI	FMI	Lamp	Comment
Name UDS DCU15	[Hex] 003D68	Tank heating Valve	068 PUHT	[DEC]	[HEX] 06		status	FnR DNOx2 p910vC241
				3	03	Short circuit to battery Open load		
UDS DCU15	003D68	Tank heating Valve	068PUHT	4	03	Short circuit to ground Short circuit to battery		FnR_DNOx2_V74
UDS DCU15	003D69	Heater of cooling line	069_PCLH	5 6		Open load Short circuit to ground		FnR_DNOx2_p910vC241
				3 5	05	Short circuit to battery Open load		
UDS DCU15	003D69	Heater of cooling line	069PCLH	3	03	Short circuit to ground Short circuit to battery		FnR_DNOx2_V74
UDS DCU15	003D6A	Heater of filterbox (UB5)	06A_PFHT	5 6 3	06	Open load Short circuit to Ground short circuit to battery		FnR_DNOx2_p910vC241
UDS DCU15	003D6A	Heater of filterbox (UB5)	06APFHT	5	05	Open circuit Short circuit to Ground		FnR DNOx2 V74
003 00013	003D0A	Treater of filterbox (OBS)	OUAFFIII	3 7	03	short circuit to Ground short circuit to battery Open circuit		FIII_DNOXZ_V74
UDS DCU15	003D73	Temperature after catalyst too low	073_SCTD	7		Down stream catalyst temp - physical (Catalyst heating time failed)		FnR_DNOx2_p910vC241
UDS DCU15	003D73	Temperature after catalyst too low	073SCTD	7	07	Down stream catalyst temp - physical (Catalyst heating time failed)	MIL	FnR_DNOx2_V74 Long Term failure
UDS DCU15	003D74	UREA pressure too low at system start	074_SMOT	2	02	UREA pressure too low at system start	MIL	Power Reduction Long Term failure
UDS DCU15 UDS DCU15	003D75 003D76	UREA pressure too high UREA Temperature in Pump Module out of	075_SUPR 076_SUTB	7	07	Urea pressure not plausible (urea pressure too high) Urea temperature box - physical (Urea Box Temp NOT OK:	MIL MIL	Long Term failure Long Term failure
UDS DCU15	003D77	range UREA Temperature in Tank out of range	077_SUTT	7		outside range) Urea temperature tank - physical (Urea Tank Temp NOT OK:		
UDS DCU15	003D78	System frozen and not free in time	078_HHSM	7		outside range) Defreezing Mode and Detection Errors (Inlet line defreezing failed)	MIL	Power Reduction
				9	08 09	Defreezing Mode and Detection Errors (pressure line defreezing failed)		Long Term failure
				10		Defreezing Mode and Detection Errors (pressure build-up in detection mode failed)		
						Defreezing Mode and Detection Errors (Back-flow line defreezing failed)		
UDS DCU15	003D7A	Coolant control valve mechanicallly	07ACCVD	6 5		mechanical defective blocked closed mechanical defective blocked open		FnR_DNOx2_V74 Power Reduction
UDS DCU15	003D7B	Reverting valve (4-2way valve?) mechanically	07B_ERVV	7		valve does not open		Tower reduction
UDS DCU15	003D7C	Startup cycle counter for pressure drop during dosing	07C_SPCC	7	07	Start up cycle counter for pressure drops during dosing exceed maximum		Power Reduction
UDS DCU15	003D7E	Battery Voltage (actual value)	07E_BMON	4 3		Low battery voltage High battery voltage	MIL	Power Reduction (FnR_DNOx2_p910vC241) Long Term failure
UDS DCU15		UREA pressure too low (in "commissioning" status)		2		Pump motor error during commissioning (pump not delivering)		
UDS DCU15	003D83	UREA Temperature too low during commissionning	083_STMPC	2		Temperatures not plausible during commissioning.		
UDS DCU15		Coolant control valve mechanically (Commissioning)	085_SCCVC	2		Blocked closed		
UDS DCU15 UDS DCU15	003D93 003D94	Static Leakage Test failed Catalyst efficiency too low (with NOx sensor)	093_SLKS 094UCAT	7 12	0C	static leakage detected (during system state 0) Catalyst efficiency too low		FnR_DNOx2_V74
UDS DCU15 UDS DCU15	003D95 003D96	Empty UREA Tank UREA Level Indication not plausible with	095_ELMT 096_PULV	7 7 7		urea tank empty Urea Level Plausibility Error	MIL	Long Term failure Long Term failure
UDS DCU15		UREA consumption Dynamic Leakage Test failed	09ASLKD	12		dynamic leakage detected (during system state 1)	MII	FinR DNOx2 V74
000 000 10	000000	Dynamic Leakage Test failed	OSAGLIND	12	00	dynamic leakage detected (during system state 1)	IVIIL	Power Reduction Long Term failure
UDS DCU15 UDS DCU15		Urea tank heater valve blocked open Urea tank heater valve blocked open	09C_HUHT 09CHUHT	7		Tank heater valve blocked open Tank heater valve blocked open		FnR DNOx2 V74
UDS DCU15 UDS DCU15	003D9D	NOx sensor measures too high NOx CAN receive frame E2SCR (Dosing,Exh gas	09DUPPM 0A1_CE2S	12 9	0C	NOx ppm not plausible 09: timeout		FnR_DNOx2_V74 Long Term failure
		flow,Exh gas temp,Error Supression, Heater, Long Term failure)		10 2	02	0A: too many CAN messages 02: SAE J1939 Check for CAN receive signal : (UREA quantity not		
				12 7	07	in range) 0C: SAE J1939 Check for CAN receive signal : (Heating status not		
				12 12	0C	in range) 07: SAE J1939 Check for CAN receive signal : (Dosing status not		
				12		0C: SAE J1939 Check for CAN receive signal : (PTO status not in		
						range) OC: SAE J1939 Check for CAN receive signal : (Exhaust gas mass flow not in range)		
						Illow not in range) OC: SAE J1939 Check for CAN receive signal : (Exhaust gas temperature not in range)		
UDS DCU15	003DA2	CAN receive frame E2SCR extended (Dosing,Exh gas flow,Exh gas temp,Error	0A2_CE2S2	2 12		SAE J1939 Check for CAN receive signal : (Long term error active signal not in Range)	MIL	Long Term failure
		Supression, Heater, Long Term failure)				SAE J1939 Check for CAN receive signal : (Error suppression Signal not in range)		
UDS DCU15	003DA3	CAN receive frame EEC1 (Driver demand, eng speed, eng torque)	0A3_CEEC	9 10		timeout too many CAN messages		
				12 2	02	SAE J1939 Check for CAN receive signal : (Torque driver demand not in range)		
				7		SAE J1939 Check for CAN receive signal : (Engine torque not in range)		
LIDO DOLIAS	0000044	CAN FT4 (Oil I Websets	OM OFTA			SAE J1939 Check for CAN receive signal : (Engine speed not in range)		
UDS DCU15	003DA4	CAN receive frame ET1 (Oil and Water temp engine)	0044_CE11	10	0A	timeout too many CAN messages		
				12 2	02	SAE J1939 Check for CAN receive signal: (Water temperature not in range) SAE J1939 Check for CAN receive signal: (Oil temperature not in		
UDS DCU15	003DA6	CAN receive frame IC1 (Boost press,	0A6_CIC1	9		range) timeout		
525250		Manifold Temp)		10 12	0A			
				2		SAE J1939 Check for CAN receive signal : (Intake manifold 1		
UDS DCU15	003DA7	CAN receive frame LFE (Fuel Rrate)	0A7_CLFE	9		temperature not in range) timeout		
				10 12		too many CAN messages SAE J1939 Check for CAN receive signal : (Fuel rate not in range)		
UDS DCU15	003DA8	CAN receive frame NO1 (NOx concentration,	0A8CNO1	9		timeout		FnR_DNOx2_V74
		NOx Sensor state)		10 12	0C	too many CAN messages SAE J1939 Check for CAN receive signal : (Nox concentration not in range)		
				2		in range) SAE J1939 Check for CAN receive signal: (Nox status not in range)		
UDS DCU15	003DA9	DCU or Heater switched "off" too long time via CAN	0A9_CTIM	9		range) Heater disabled by CAN request for a too long time Dosing disabled by CAN request for a too long time		FnR_DNOx2_p910vC241
UDS DCU15	003DA9	DCU or Heater switched "off" too long time	 OA9CTIM	12	0C	Error suppression via CAN request for a too long time Heater disabled by CAN request for a too long time		FnR DNOx2 V74
UDS DCU15		via CAN UREA Tank level error (CAN message or	OAA EULS	10	0A	Dosing disabled by CAN request for a too long time Open content		FIR_DNOx2_y74 Long Term failure FnR_DNOx2_p910vC241
, 22.10		electrical with real sensor)	_	10 2	0A 02	0A: too many CAN messages 02: SAE J1939 range check: UREA tank level out of range		_
				3 4	03 04	03: Level over CAN: SAE J1939 Signal Not in Range Level sensor connected directly: SRC high		
				11	0B	04: Level over CAN: SAE J1939 Erraneous Signal Level sensor connected directly: SRC low		
						0B: Level over CAN: SAE J1939 no Signal available Level sensor connected directly: Sensor Supply error	_	
UDS DCU15	003DAA	UREA Tank level error (CAN message or electrical with real sensor)	0AAEULS	3 4	04	03: Level over CAN: SAE J1939 Signal Not in Range Level sensor connected directly: SRC high	MIL	FnR_DNOx2_V74
				2		04: Level over CAN: SAE J1939 Erraneous Signal Level sensor connected directly: SRC low		
UDS DCU15	003DAC	UREA quality sensor re lated errors CAN	0ACCUQS	9		02: Level over CAN: SAE J1939 no Signal available Level sensor connected directly: Sensor Supply error timeout		FnR DNOx2 V74
323 200 15	JUJUAU	quality solisor to lated errors CAIN		10 12	0A	too many CAN messages SAE J1939 Check for CAN receive signal: (UREA quality signal		<u></u>
UDS DCU15	003DAD	CAN receive frame Time/Date	0AD_CTDA	9		not in range) timeout		
				10 12	0A 0C	too many CAN messages SAE J1939 range check error of seconds		
				12 12	0C 0C	SAE J1939 range check error of minutes SAE J1939 range check error of hours		
				12 7	07	SAE J1939 range check error of months SAE J1939 range check error of days		
UDS DCU15	003DB1		OB1_CAMB	9	09	SAE J1939 range check error of years timeout		
		for CAN receive signal : (Signal Range Check: Signal not in range / Erroreous		10 12	0C	too many CAN messages SAE J1939 Check for CAN receive signal : (Barometric pressure		
		Signal / Signal not available)		2		not in range) SAE J1939 Check for CAN receive signal : (Ambient air temperature not in range)		
UDS DCU15	003DB8	CAN receive frame PROA (Fuel quantity)	088_CPRO	9		temperature not in range) timeout too many CAN messages		
				12	0C	too many CAN messages SAE J1939 Check for CAN receive signal : (UREA tank level not in range)		
				7		(UREA tank temperature not in range)		
				L		SAE J1939 Check for CAN receive signal : (Fuel injection quantity not in range)		
UDS DCU15		Detection of blocked filter	OBCDBFE	7	07	Error detection of blocked Filter		FnR_DNOx2_V74 Long Term failure
UDS DCU15	U03DBD	Warning for detection of blocked filter	0BDDBFW	7	07	Warning for detection of blocked Filter	L	FnR_DNOx2_V74

Column C	Comment
10 0 0	
USB COUIS COCCUT Company Frozen Cycle of congent powder CoLLECC 9 8 6	
Description	
USB DCUIS OSD CC CAN receive flame ECO OSD CCC	
10 0	
2	
12 Co Co Set 1989 Check for CAM receive signal : (Exhaust Dev Port In Image)	
Co. Sec. 11939 Check for CAM receive farme EGF DC4_CEGF DC4_	
USS DCUTS 0300CC CAN receive frame ECFT 0C4_CEGF 9 0 00 00 Warming for detection of blooked Filter 1 0 0 0 0 0 0 0 0 0	
2 20 20 20 20 20 20 20	
USB DOUTS 0000006 CAN receive frame EECS 0.05, CECS 0.05 0.0	
10	
USB DCU15	
US DCU15	
USS DCU15 003DC7 CAN receive frame PROB 0.7 CPPB 9 0.8 to many CAN messages 0.8 timeout 0.9 timeou	
USS DCU15	
2 2 2 SAL 19/39 Check for CAM receive signal : (Relarder Percent Torque not in range)	
USS DCU15 003DC2 CAN Bus OFF error CS2_GBOF 9 09 BUS OFF error CAN2	
USB DCU15 003DCA Load point evaluation OC_AELP 3 3 3 3 3 3 3 3 3	
USB DCU15 003DCE Cand point evaluation (above and below limit) 0CB_AELP2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
1	
UDS DCU15 003DD1 EEPROM / Checksum failures 0D1_EEPM 12 0C EEPROM Detection error 2 0 EEPROM size 2 0 0D Wrong EEPROM size 2 0D Wrong EEPROM size 2 0D Wrong EEPROM size 2 0 0D Wrong EEPROM size 2 0D Wrong EEPROM size	
B	
UDS DCU15 003DD2 Ingition "on" signal K15 0D2 EK15 0D3 Ingition "on" signal K15 0D2 EK15 0D3 Ingition "on" signal K15 0D3 EK15 0D	
UDS DCU15 003DD2 Ingition "on" signal K15 0D2_EK15 2 02 digital input ignition ON not sensed during initialisation 1 UDS DCU15 003DD3 Main Relay opens too early / too late 0D3_EMRL 06 6 06 main relay shut off too early (before EEPROM update) MIL main relay shut off too late main relay shot circuit main relay shut off too late main r	
UDS DCU15 003DD3 Main Relay opens too early / too late 0D3_EMRL 0D	
UDS DCU15 003DD4 Too high UREA Temperature in Pump module (Emergency shut off) 004_EMRS 7 07 over temperature detection (urea temp. in pump module) Power Reduction urea leakage detection (static or dynamic) Unstance of temperature sensor (after SCR catalyst) 003DD1 1 Plausibility of downstream catalyst temperature sensor (after SCR catalyst) 003DD1 1 Plausibility of downstream catalyst temperature sensor (after SCR catalyst) 003DD1 1 Plausibility of downstream catalyst temperature sensor (after SCR catalyst) 003DD1 1 Plausibility of downstream catalyst temperature sensor (after SCR catalyst) 003DD1 1 Plausibility of downstream catalyst temperature sensor (after SCR catalyst) 003DD1 1 Plausibility of downstream catalyst temperature sensor (after SCR catalyst) 003DD1 1 Plausibility of downstream catalyst temperature sensor (after SCR catalyst) 003DD1 1 Plausibility of downstream catalyst temperature sensor (after SCR catalyst) 003DD1 1 Plausibility of downstream catalyst temperature sensor (after SCR catalyst) 003DD2 003DD2 1 Plausibility of downstream catalyst temperature sensor (after SCR catalyst) 003DD2	
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error (dynamic / static)	C241
UDS DCU15 003DE4 Urea box temperature sensor plausibility 0E4PUTB 12 0C Plausibility of pump module temp. sensor (dynamic) FnR_DNOx2_V74	
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error (dynamic / static) UDS DCU15 003DE5 Urea tank temperature sensor plausibility 0E5PUTT 12 0C Plausibility of urea tank tempe. sensor (dynamic) FnR_DNOx2_V74	
error (dynamic / static) UDS DCU15 003DE6 UREA Tank Temperature not plausible with 0E6 EUTT 05 Plausibility of urea tank temp. sensor (static) 17 07 Plausibility of urea tank temp. sensor (static) 18 09 09: Temp over CAN: SAE J1939 Timeout Temp sensor connected FnR DNOx2 p910v	rC241
Pump module temperature 10 0A directly: SRC high	OLT I
2 02 0A: Temp over CAN: SAE J1939 Too many messages Temp 3 03 sensor connected directly: SRC low	
4 04 02: Temp over CAN: SAE J1939 erroneous signal 0 00 03: SRC High: raw value UREA temperature too high	
1 01 04: SRC Low: raw value UREA temperature too low 00: SRC High: diagnostic value UREA temperature too high	
UDS DCU15 003DE6 UREA Tank Temperature not plausible with 0E6EUTT 3 03 03: Temp over CAN: SAE J1939 Timeout Temp sensor connected FnR DNOx2 V74	
Pump module temperature Pump module temperature Pump module temperature 4 04 directly: SRC high 2 02 04: Temp over CAN: SAE J1939 Too many messages Temp	
sensor connected directly: SRC low	
UDS DCU15 003DE7 Back flow line blocked 0E7_SBFL 02: Temp over CAN: SAE J1939 erroneous signal Power Reduction	
UDS DCU15 003DE8 Urea pressure not reduced during start up 0E8_SCCV 2 02 Blocked closed MIL Long Term failure UDS DCU15 003DEA Pressure line blocked 0EA_SPRL 7 07 pressure line blocked MIL Power Reduction	
UDS DCU15 003DEB Low UREA level 1 (warning) 0EB_EUL1 1 01 UREA level below Limit 1 Low UREA level below Limit 1	
UDS DCU15 003DEC Low UREA level 2 (warning) 0EC_EUL2 1 01 UREA level below Limit 2 UDS DCU15 003DF0 Group error path UREA injection control 0F0_LCNP 12 0C Error belonging to group UREA Injection control MIL Long Term failure	
UDS DCU15 003DF1 Group error path Air control 0F1 LDIN 12 0C Error belonging to group air control MIL Long Term failure UDS DCU15 003DF2 Group error path catalyst temperature 0F2 LIUQ 12 0C Error belonging to group catalyst temperature out of range MIL Long Term failure	
UDS DCU15 003DF3 Group error path NOx exceeded 0F3LNTE 12 0C Error belonging to group NOx exceeded active MIL Eng Terror belonging to group NOx exceeded active MIL FnR_DNOx2V74 Long Terror failure	
UDS DCU15 003DF4 Group error path UREA Tank empty 0F4_LTEM 12 0C Error belonging to group UREA tank empty active MIL Long Term failure	